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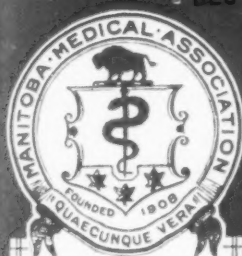
Manitoba Medical Review



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Surgery

Modern Advances in Orthopaedic Surgery

William E. Barker, M.D.

The definition of "Modern Advances in Orthopaedic Surgery" is the advancement that has occurred in modern times without any specific time duration. Modern advances have gone through a gradual development and have slowly evolved over a scope of time of approximately ten years.

The "bone setter," whose heavy hands pulled and straightened broken limbs, is now a historical figure. The ever-increasing sphere of orthopaedics includes many fields in which surgery demands the technique of ultimate dexterity. Because there are many branches to orthopaedics four of these will be dealt with, in which significant advancement has been achieved.

Intramedullary Fixation of Fractures

In an era of automobile accidents and wars, the spotlight falls on trauma. Fractures occupy a large part of trauma. Significant advancement has been made in fracture fixation.

Intramedullary fixation was first introduced by Hey Groves in England in 1916, when he drove a steel rod down the medulla of a femur. The technique was revived and perfected during World War II by Kuntscher, who advocated the use of a nail, trefoil in section. The use of this type of fixation has spread to every tubular bone in the body.

There are three advantages:

- (1) accurate reduction
- (2) solid, dependable fixation without diastasis
- (3) function of the muscles and the joints of the involved extremity during healing.

The indications—which were previously confined to simple transverse and short oblique fractures in the middle one-third of the femur, have now broadened to include:

1. Fracture in mid-half of the femoral diaphysis—generally six inches proximal to the adductor tubercle and two inches distal to the lesser trochanter.
2. Compound fractures ten days to two weeks after wound healing, with no sepsis.
3. Segmental fractures.
4. Comminuted fractures with supplementary internal fixation.
5. Malunion, delayed union, and non-union.
6. Pathological fractures.
7. Multiple fractures of bones in one limb.
8. Severe burns and fracture.
9. Paraplegics with fractures.

The recent application to fixation of bones of the hand presents significant advancement in the management of hand trauma; its appeal mainly being the preservation of hand function and the reduction of economic loss. It must be understood that all fractures of metacarpals and phalanges are not treated in this manner, but only where indicated. It is used when the fracture is grossly displaced and where maintenance of alignment by other means would be extremely difficult. This method also applies to compound fractures if surgically clean about four hours after injury.

Some specific usages of this method in the hand will be briefly mentioned. The intramedullary splint is usually a Kirschner wire about 0.045 inches to 0.062 inches in diameter. In fractures of the middle and proximal phalanges and the metacarpals, the "K" wire is introduced retrograde by exposing the fracture site or by closed method. Although this technique is not complicated there are certain principles that should be observed. The first is that the procedure should preferably be carried out under full aseptic technique of the operating room. Local block or general anaesthetic is used according to the extent of the injury. Subsequently other principles will be included.

In fractures of the middle and proximal phalanges and metacarpals, the open method with retrograde introduction is used in old fracture, with reconstruction—in fresh fractures, closed pinning is the performance. In fractures of the middle and proximal phalanges the finger is held in flexion and the "K" wire drilled into the distal end of the phalanx, through the middle of the extensor tendon and the head of the phalanx, and hence down the inside of the diaphysis. X-Ray check is necessary to assess the proximal position of the pin. The end of the protruding pin may be bent to a right angle to prevent over-penetration, and then covered with gauze and collodion. The same technique applies to metacarpals, except that the pin is introduced through the radial side of the head where the extensor expansion is thin. This type of splintage has been used by some with success with no external support, as described by Vom Saal of Yonkers, New York. However, it would seem that external support initially gives the patient more comfort and assures more rapid union. This cannot be substantiated by statistical reference. With no external support the pin is removed in about four weeks. With external support and finger immobilization in flexion, the pin is removed at about three weeks. Then, depending on site and character of the fracture, further external support may be

required for a short period. It must be stressed that with external support, the finger is immobilized nearly in complete flexion, so there is minimal finger joint stiffness at the termination of treatment.

The following is a brief description of a recently described treatment for mallet finger. In 1952 Pratt recommended the insertion of a Kirschner wire through the end of the distal phalanx with dorsal interphalangeal joint in hyperextension and proximal interphalangeal joint at about right angles. The "K" wire was drilled on into the middle phalanx then on to its volar surface, finally terminating by being embedded in the proximal phalanx. Thus, two joints are immobilized, external fixation is not required and only a small dressing is needed over the end of the finger. The pin is removed in three to five weeks.

The Treatment of Bone and Joint Tuberculosis

H. O. Thomas for many years taught rest, "enforced, uninterrupted and prolonged." This rigid conservative regime improved the prognosis immensely, and early operative orthopaedics which consisted of amputation ceased to play an important role.

Since tuberculosis is always remembered as a generalized disease, rest includes the body as a whole, and the involved joint is immobilized until an ankylosis gives a more permanent type of internal fixation.

It is not desirable here to run through the various surgical procedures that have been developed to render permanent rest to a diseased part—such as the posterior-spinal fusion of Albee and Hibbs (1911). Thus surgery came to play a prominent part in the treatment of bone and joint tuberculosis.

Direct surgical approach to the lesion did not come into prominence until after the introduction of Streptomycin in 1944 by Waksman and Shatz. Later the development of P.A.S. and I.N.A.H. and the combination of these with Streptomycin facilitated the introduction of surgical procedures directly attacking active disease.

The reasons for the success of the combination of surgery and chemotherapy are these: Medlar (National T.B. Association, 1949) pointed out that necrosis in human skeletal T.B. was a prominent feature, and so chemotherapeutic drugs did not penetrate the disease. The cause of late mortality (Harris and Coulthard, 1942) are three in number:

1. Miliary tuberculosis
2. Secondary septic infection responsible for half late mortality in pre-antibiotic days
3. Other half due to associated tuberculosis lesions.

Chemotherapy has controlled the first two when used with surgery. Surgically, a pathway can safely be opened so that the chemicals have access to the organism of the local lesion, without

fear of miliary tuberculosis or secondary septic infection.

It can be said that the duration in hospital is now roughly halved when treatment consists of antibiotics plus surgical attack on the disease. This indeed is an advancement of great significance. It must be remembered that the "prolonged rest" used in conjunction with antibiotics and surgery still plays a most prominent role.

It is now safely possible to drain abscesses and joints in the presence of active tuberculosis and necrotic tissues and bony sequestra can be removed and early arthrodesis obtained.

Surgical procedures that may be used are the central curettage of isolated lesions in the bodies of vertebrae, which are then packed with bone chips. (M. C. Wilkinson, 1954). The antero-lateral decompression first introduced by Norman Capener of Exeter in 1933, which he termed a lateral-rachiotomy—brought to light in 1946 by Dott and Alexander, and later used with great success by Griffiths, H. J. Seddon and R. Roaf, in the treatment of Pott's paraplegia—has made possible the direct attack on the factors causing cord compression.

The foundation of the treatment of skeletal tuberculosis remains "prolonged rest." The patient is put to rest initially and given the anti-tuberculous drugs for a period of three months or longer before surgery is undertaken. This however, does not apply to Pott's paraplegia if antero-lateral decompression is anticipated and paralysis has been present a month or longer.

Reconstructive Surgery of the Hip Joint

Osteoarthritis of the hip joint is such a common problem that the surgical treatment will be briefly mentioned. By and large the operative treatment follows three lines:

- (1) osteotomy
- (2) arthrodesis
- (3) arthroplasty

McMurray of Liverpool in 1935 introduced an intertrochanteric osteotomy of the upper end of the femur and this has recently come into great prominence in the treatment of hip osteoarthritis, where the indications are present. The osteotomy line runs obliquely, medially and upwards to end just above the lesser trochanter. The distal fragment is displaced under the acetabulum and femoral head so that the line of weight-bearing now is straight down, rather than laterally and down. The length of convalescence which is three to four months is the main drawback. At present this has been rather modified by the use of a special pin-plate for internal fixation. A few days after surgery the patient is able to get out of bed and graduate to crutches with non-weight-bearing on the operative side. After three to four months he commences full weight-bearing. The object of the procedure is relief from pain which is usually permanent

and correction of deformity. Mobility is not improved however, and about 50% lose some range of movement.

The recent introduction of a metallic prosthesis by Austin T. Moore of Baltimore, and others similar, such as the Eicker and Thompson, has given us a femoral head replacement which so far has been successful. This prosthesis has an intramedullary pin unlike the Judet. The approach with a Gibson postero-lateral skin incision and the splitting of short posterior rotators of the hip, allows us to leave hip abductors intact. This type of surgical treatment is excellent in the elderly, since it is not yet known how long such a prosthesis will stand up without pain recurrence. The main advantage is—out of bed in a few days and walking with weight-bearing in two or three weeks. This advantage in the elderly needs no explanation.

Arthrodesis is mentioned as a matter of completion, since it is not a recent development. This, when used, may be used in the younger age group since, if successful, it is completely durable.

Scoliosis and Treatment

Recently a vast amount of work has been done on scoliosis, as compiling statistics, so that we can prognose, and also in the treatment by correction and posterior spinal fusion which is now very successful.

When presented with a case of scoliosis a useful clinical classification to bear in mind is as follows:

1. **Postural**—A single lateral curve, which disappears on forward flexion or suspension by the head. This curve usually disappears spontaneously.

2. **Compensatory**—This is secondary to short leg with pelvic obliquity and thus a compensatory scoliosis.

3. **Structural scoliosis**—This is characterized by lateral curvature with rotation of vertebrae, the primary curve which does not disappear on forward flexion.

Primary cause may be easily identified such as—poliomyelitis, congenital abnormalities, neurofibromatosis with "café au lait" spots. Rarer are muscular dystrophies, neuropathies—such as syringomyelia, spastic paralysis and Friedreich's Ataxia. Also rickets, rarely a cause nowadays.

The largest group of structural scoliosis falls under the idiopathic bracket.

Ponseti and Friedman of Iowa City in 1950 found that the higher the apex of the primary curve the worse the prognosis. In idiopathic scoliosis the curve patterns have been thoroughly studied. This enables us when seeing such a patient to give a prognosis. In infancy the male predominates, with the curve to the left. Early teens is the commonest age of onset in girls, affected about fifteen times

more often than boys, and the curve is usually to the right.

The curve patterns of idiopathic scoliosis are:

1. lumbar curve with apex at L/1, L/2 or L/3
2. lumbo-dorsal with apex at about T/11 or T/12
3. thoracic
4. combined thoracic and lumbar scoliosis
5. infantile idiopathic thoracic scoliosis between six months and three years of age.

The treatment is conservative and operative. Thoracic idiopathic scoliosis has a bad prognosis and usually spinal fusion. The low curves, such as lumbar and thoraco-lumbar may be handled conservatively by serial Risser localizer plasters, which are put on after correction on a Risser frame. The growing child may require many of these with periods of freedom between them, until the epiphyses fuse which is signified by the iliac apophyses extending all the way around the crests. Neurofibromatosis with scoliosis carries a very bad prognosis and spinal fusion is usually necessary.

Speaking generally of operative treatment, correction to the degree possible is obtained by using a turn-buckle Risser jacket or by using the Risser frame, with parallel traction, lateral bend and postero-lateral compression with a localizer. A plaster jacket is applied. A posterior spinal fusion is carried out through a window in the back of the plaster. All the rotated vertebrae are fused. The patient spends about six months in a plaster jacket and then six months in a back brace.

Summary and Conclusion

1. A brief discussion of four branches of orthopaedic surgery in which there has been significant advancement—has been presented.
2. The inclusion of material not of modern origin was necessary to preserve continuity.
3. Specific examples of procedures in each field have been presented.

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Neurosurgery

Recent Trends in Neurosurgery

Norman C. Hill, M.D.*

The interest of neurosurgeons in the last several years has settled mainly on the problems involved in the treatment of conditions previously considered to be beyond the scope of neurosurgical attack. Among these are the occlusive cerebrovascular diseases; those diseases producing tremor and rigidity; and severe diffuse cerebral damage following head injury. These, and some other new neurosurgical concepts will be discussed in this paper.

About 15% of typical "strokes" are produced by surgically amenable lesions, such as brain tumor, abscess or subdural hematoma. The neurosurgeon's first endeavour therefore, when confronted with the "stroke" patient, is to carefully define those patients who are not suffering from occlusive vascular disease, but from a disease which may closely mimic it. The next problem is to select from those patients who do have occlusive vascular disease, those which will benefit from either surgery or anti-coagulant therapy. It is now generally believed that appropriate patients exhibit symptoms which are intermittent or slowly progressive, probably indicating a partial occlusion of a cerebral artery. If the partial occlusion is in the vertebral-basilar system, or above the division of the internal carotid into anterior and middle cerebral, then anti-coagulant therapy may be indicated. The neurosurgeon is, as yet, not prepared to attack the artery directly in these sites. However, if the partial occlusion is in the carotid artery in the neck, particularly if it is confined to the region of the division of the common carotid into external and internal carotid, then surgery may be indicated. Transient hemiparesis, transient aphasia, or transient blindness should suggest the diagnosis. Diagnosis is made by palpation of the carotid in the neck or mouth (fairly unreliable), by ophthalmodynamometry (the measurement of the retinal artery pressures), by careful occlusion of the opposite carotid (accent on careful), and most important, by carotid angiography. The probable indications for surgery are a relatively young patient, with partial occlusion, transient symptoms on the non-dominant side, and no insufficiency of the vertebral-basilar system. Methods of increasing collateral circulation, such as cervical sympathectomy and block, stripping of the carotid artery, denervation of the opposite carotid sinus, tying of the external carotid, and occlusion of the cerebral venous drainage, have not met with much success. Surgery directed at the thrombotic process has been more successful. This includes direct thrombendarterectomy; excision of the diseased segment and direct end to end anastomosis of the

proximal and distal segments; and replacement of the diseased segment by venous or arterial homografts. By-pass techniques include placement of the external carotid into the carotid above the site of occlusion (which sacrifices an important collateral channel) and the use of a Tapp-Edwards crimp graft from the subclavian to above the site of occlusion. In some cases, symptoms are benefited by excision of the transverse process of the axis which may impinge on the artery when the patient turns his head. The grafting procedures are generally performed under hypothermia and are followed by anti-coagulant therapy.

The surgical treatment of Parkinson's disease and choreoathetoid disorders is probably meeting "with sufficient success to satisfy both patients and doctors," according to a recent observer at the 1958 International Congress in Brussels. Most popular is a practically freehand method of introducing a lesion into the globus pallidus or ventrolateral nucleus of the thalamus, after a small amount of air has been introduced into the ventricular system. The very chronic completely disabled Parkinsonian patient does not benefit and the technique is now being employed in people who have not yet reached this advanced state. Lesions in the globus pallidus are effective in relieving rigidity, whereas lesions in the thalamus have a greater effect on the tremor. The latter lesion is now being placed first in most cases. Disturbances of intellect have been reported with bilateral thalamic lesions. Although the enthusiasts for these techniques claim relief of rigidity in 80% of cases, and relief of tremor in 75%, many competent neurosurgeons have not been able to duplicate this kind of result. The danger of hemiplegia should not be forgotten. Not all choreoathetotic patients benefit, greatest relief occurring at younger ages.

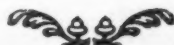
Because of the continuing occurrence of high speed accidents, severe head injury presents a constant problem to the neurosurgeon. Recent physiologic studies have indicated that the centers for consciousness reside in the upper brain stem in the reticular formation and that they depend in turn upon the receipt of stimuli from sensory end organs for their normal function. Concussion and severe disturbances of consciousness probably result from inactivation of these centers which are then unable to activate the cortex. The brain stem is, of course, also the center for other important centers, such as the respiratory and cardiovascular centers. Severe primary injury to these structures probably results in irreversible changes. However, the centers may be injured secondarily as the result of cerebral edema and subsequent anoxia which comes on hours after head injury. It is towards prevention of these secondary changes

that hypothermia is directed. Hypothermia reduces the oxygen needs of the brain and the cerebral volume, though whether it prevents cerebral edema is by no means certain. To be of benefit, hypothermia must be instituted within three days, preferably within hours. About 10 to 20% of decerebrate unconscious patients may be rescued by this means. Such patients must, of course, be carefully watched for evidence of extradural, subdural or intracerebral hematoma. Whether to do a lumbar puncture in head injuries is still a thorny problem, but the recent report of death within minutes in one-fifth of patients with extradural hematoma, following lumbar puncture, points up the dangers of the indiscriminate use of this test. A careful differentiation should be made between lumbar puncture with and without the removal of fluid. Measurement of the CSF pressure and a note as to whether the fluid in the manometer is bloody or not would seem to be limits of the test in head injury. It is doubtful that the test should be used except where facilities are available for craniotomy. Angiography is finding increasing usefulness in head injury. It can be done under local anesthesia and gives definite localization in cases of subdural hematoma. Finally it seems now apparent that the cervical spine may be injured by extreme hyperextension as well as by hyperflexion, thus patients with cervical cord injuries should be transported with the head in the neutral position, not in hyperextension.

Congenital lesions of the central nervous system continue to intrigue neurosurgeons. Recently, in cases of hydrocephalus, a shunt has been devised which drains fluid from the cerebral ventricle into the right cardiac auricle, and preliminary experience seems encouraging (as it has in other forms of treatment of hydrocephalus in the past). This type of shunt would avoid the loss of electrolytes which occurs with ventriculo-ureteral shunts. Ventricular fluid is also being shunted into the

lesser omental sac, the Fallopian tube and the subdural space. There is much interest in the syndrome of the tight filum. This syndrome occurs usually during periods of growth spurt; the cord is held from its natural migration upward by a shortened thickened filum terminale. The child usually presents with disturbances of urinary control and with difficulty in gait. The condition is alleviated by sectioning the tight filum terminale which presents a typical picture on myelography. Some of the exaggerated claims for the benefits of sectioning the filum terminale in other neurologic conditions should be carefully evaluated. Acute subdural hematoma in the infant may constitute one of the rare neurosurgical emergencies which sometimes must be treated by the physician not specially trained in neurosurgery. Besides head injury, influenzal meningitis is not an uncommon etiologic factor. Initial bilateral drainage of not more than 15 c.c. from the subdural space through the anterior fontanelle, lateral to the midline, is done. This will suffice until the infant can reach a neurosurgical center where repeated aspirations and perhaps craniotomy may be indicated. Any infant who fails to thrive after recovery from meningitis should be considered a candidate for subdural hematoma.

Finally, much excellent work has been done recently on the syndromes associated with laterally protruded cervical disc, producing pain and paresthesia in the arm, and we are at the point now where it seems essential that this condition be ruled out before the diagnosis of brachial neuritis or some equally vague synonym is applied. After an adequate course of conservative therapy has failed, surgery will alleviate the condition in a high percentage of cases. Centrally protruded cervical discs produce a different set of neurologic symptoms, and are, of course, more difficult to treat. The symptoms may mimic multiple sclerosis, and careful neurologic and spinal fluid examination are necessary to clarify the diagnosis.



Obstetrics & Gynaecology

Obstetrics and Gynaecology, 1957-58

A. W. Andison, M.D.

The past two years have seen no dramatic changes in the practice of Obstetrics and Gynaecology. Nevertheless, while there have been no outstanding developments, very many problems associated with the specialty are being carefully investigated. It would be impossible in an article of this nature to present a satisfactory summary of the extensive recent literature dealing with this field. The following notes reflect only what has been of greatest interest to the writer and make no claim to completeness.

In the article which appeared under the same heading in this Review two years ago, reference was made to the increasing attention being paid to the matter of foetal hypoxia developing with the approach of term and increasing to a critical degree as the foetus becomes "post-mature." Opinion on this subject is by no means settled. In the United Kingdom obstetricians seem to be divided into two camps: those who routinely induce labour in patients who go beyond the calculated date of term, and those who believe that such a course fails to lower the perinatal mortality rate and increases the incidence of Caesarean section. The strongest supporter of the former view is undoubtedly Dugald Baird of Aberdeen. This is perhaps to be expected because Walker carried out his investigations in Aberdeen. It was he who demonstrated the diminishing oxygen content of cord blood with the approach of term and the consequent rise in cord blood haemoglobin in an attempt to cope with the oxygen-poor environment present after term had been reached. Baird recently¹ declared that the induction rate in Aberdeen during the past five years was 23.6 percent. During this time the perinatal mortality fell from 32 to 26 in all parities and from 37 to 27 in primigravidae. He performs the majority of inductions routinely in pregnancies not ending spontaneously before the end of the forty-first week. If, when the membranes are ruptured, the liquor is found stained with meconium, Caesarean section is performed forthwith. The Caesarean section rate for all parities was 3.8 percent in his series and for primigravidae it was 4.5 percent. While meconium staining of the liquor amnii has been accepted as denoting some measure of foetal distress from time immemorial, to accept this single feature as an indication for immediate section must appear startlingly radical to the majority of obstetricians in this country.

Gordon Lennon², writing from Bristol, gives an induction rate of 37.9 percent with an uncorrected perinatal mortality rate of 2.8 percent. His overall

Caesarean section rate is 5.2 percent but in induced cases it is 2.5 percent. He attributes this comparatively low rate to the routine use of a pitocin drip if labour has not become established twenty-four hours after the membranes have been ruptured over the internal cervical os. However, an anonymous authority writing in the *British Medical Journal*³ points out the danger of a pitocin drip in inducing uterine contractions so violent as to embarrass an already inefficient placenta, which is supposed to constitute the grounds for the induction of labour in the first place; in a case of post-maturity the margin of safety, if we accept Walker's results, is small.

The high frequency of Caesarean section into which one may be forced is demonstrated by the results of Cope and Pearson⁴. Their rate in induced cases was 14.5 percent; a routine section was performed if labour was not established after 72 hours. Their total perinatal death rate was unchanged, although the rate in the induced cases was lower than for the group as a whole. These last results bear out the admonition of Gibberd⁵ that babies may be saved from the frying-pan of post-maturity for the fire of induction.

Another who lends the weight of his authority against routine induction is F. J. Browne⁶. He succinctly presents the evidence for his opinion in the following statistics gathered from different hospitals:

Hospital	Induction for post-maturity	Perinatal mortality	Caesarean section rate
A	8.4%	4.1%	9.1%
B	0	3.3%	1.8%
C	0	2.7%	Nil for post-maturity

Faced with these disturbing figures for Caesarean section rates, and considering that Dugald Baird's improved perinatal mortality rate may be due, not to the rescue of the infants from the perils of postmaturity, but to generally better obstetric care engendered by the intense interest of his department in improving their results, one's conclusion must be that better evidence has yet to be presented before we join the ranks of the inducers. One is confirmed in this view by the failure of other workers to obtain the same results as Walker, the data which let loose this whole mad chase after rupturing membranes as soon as a patient goes a day or two beyond term. Bancroft-Livingstone et al.⁷ could find no correlation between the oxygen level of umbilical venous blood and either foetal or maternal age, contrary to Walker's findings which have gained such wide acceptance. Nor did these later workers find any correlation between foetal maturity and haemoglobin level, either in the presence or absence of foetal

distress. They are firmly convinced that chronic hypoxia is not a feature of prolonged pregnancy.

The induction of labour is still a very uncertain procedure. Even though all the features are present which would lead one to expect a prompt onset of uterine contractions, viz.: an effaced and partly dilated cervix and a vertex presentation well engaged in the pelvis, nevertheless rupture of the membranes may utterly fail to initiate labour. Nor is a pitocin drip invariably successful in correcting the situation. We still do not have a method of inducing labour that is safe, simple and effective.

Undoubtedly one of the most serious questions facing obstetricians at the present time is whether diagnostic radiology (x-ray pelvimetry, placentography and salpingography) has an unfavourable influence on the normality of the foetus and of future generations. Not only is this problem receiving serious attention in many scientific journals, it has also been seized upon by the lay press, so that lurid headlines are seen prominently displayed on the covers of innumerable magazines on every newsstand. Two years ago in this Review reference was made to a preliminary report by Stewart et al. on the increased incidence of leukemia and malignancy in the children of mothers x-rayed during pregnancy. A further report was published in 1958⁸ describing a study of all children in England and Wales who had died of leukemia or cancer before their tenth birthday during a three-year period, and a comparison of their prenatal and postnatal experiences with those of a control group of healthy children. The results showed that the frequency of three pre-natal events, namely direct foetal irradiation, virus infections and threatened abortion, was significantly higher among the dead children than among the living children. The final conclusion, however, is that foetal irradiation does not account for the recent increase in childhood malignancies. Nevertheless, the finding of a case excess for this event emphasizes the need to limit to a minimum the doses for essential medical x-ray examinations.

In this connection, D. W. Lindsay⁹ has estimated that in vertex presentations the foetal gonads are 20 cm. from the central ray used in the views for pelvimetry. The genetic hazards to the foetus, therefore, must be considered negligible. On the other hand, Gunz et al.¹⁰ reporting from New Zealand, describe a case in which acute leukemia developed in an infant following intra-uterine radiation. The mother was extremely obese and five exposures were made. The total dose was estimated as 25 r., equivalent to the dose received by the majority of the inhabitants of Hiroshima.

For the practising obstetrician the only reasonable attitude at present is that where the danger of not making a radiological examination is greater than the exceedingly small risk of malignancy, x-ray studies should not be omitted. On the other hand he will avoid, for example, placentography

before the 30th week when the results are likely to be equivocal, so that the procedure will have to be repeated when pregnancy is further advanced. He will eschew routine x-ray pelvimetry of primigravidae, which has been advocated in the past by some authorities. Intravenous pyelography should be postponed, if at all possible, until after delivery. This altered outlook upon the free use of radiography may well mean that those practising obstetrics will be obliged to cultivate once more their clinical senses in assessing pelvic capacity and the progress of a trial of labour, in diagnosing placenta praevia and malpresentations, so that they are perforce less dependent for their course of action on a radiologist's report. It must be admitted that the prospect affords the writer a certain amount of grim satisfaction.

Of another order is the general effect of ionizing radiation in causing genetic damage. Radiation-induced mutations are in general harmful and increase in direct proportion to the genetically significant exposure. The report of the Medical Research Council¹¹ estimates that diagnostic radiology in Britain contributes a population gonad dose of at least 22 percent of the natural background radiation. The latter supplies an estimated genetically significant dose of 3 rem in 30 years. The United Nations Committee¹² goes so far as to claim that the values for the genetically significant dose from medical procedures are of the same order as the doses from natural sources. Definite conclusions are difficult to reach, however, and this whole problem requires a great deal of further study. Any dogmatic statements on the subject must be suspect, at least for the present. Consideration must be given to the following warning included in the United Nations report, even though it is in general terms: "Medical and industrial procedures tending to increase radiation levels to which human populations are exposed should be carefully weighed as to such benefits or hazards as they may have."

In the field of carcinoma of the cervix, the most important recent developments would appear, to the writer, to be the widespread rise of two serious misconceptions. The first of these is that carcinoma-in-situ can be diagnosed by a Papanicolaou smear. This erroneous belief can lead to serious consequences. The report of a "positive" smear, if interpreted as carcinoma-in-situ by the attending doctor can induce him to undertake the treatment of that condition when a totally different scheme of management is called for. The Papanicolaou smear identifies malignant cells and does NOT distinguish between invasive and in-situ carcinoma. On the receipt of a positive smear, it is the duty of the doctor to provide the pathologist with more material for examination. Should there be a suspicious-looking area on the cervix, a punch biopsy may suffice to afford evidence of invasion, and the diagnosis is clear. If the cervix appears

reasonably healthy or shows a symmetrical erosion, then a cone of tissue, including the entire squamocolumnar junction and reaching at least two centimetres up the cervical canal, should be removed with a cold knife and submitted to the pathologist. (On the same occasion curettage of the remainder of the canal and of the uterine corpus should be carried out and the tissue recovered submitted separately). Study of serial sections of the cervical cone will enable the pathologist to state whether invasive carcinoma is present or only carcinoma-in-situ, and if the latter, whether or not the entire lesion has been removed in the cone. A decision can then be made as to whether conservative or radical treatment is to be selected for that particular case. But obtaining a smear positive for malignant cells, it must be emphasized, is only the initial step in reaching a diagnosis. This point has been laboured to the point of being tedious, and obviously it is elementary to many, but there is plenty of evidence that it is by no means understood by all who are responsible for these cases.

Another grave error not infrequently encountered in the same particular field, is in the attitude towards surgery for cervical carcinoma. During the past five years or longer, practically everyone has heard that surgery is now being advocated for cervical cancer, whereas in the past treatment was restricted to the use of radium and x-ray radiation. The general prevalence of this idea has been furthered by the advocacy of surgery—total hysterectomy—for cases of carcinoma-in-situ of the cervix. Unfortunately, a loose interpretation of these ideas has led to the impression that the modern treatment of cervical carcinoma is to perform hysterectomy, while radium and x-radiation are only palliative in nature and reserved for hopelessly advanced cases. What is more tragic is that some doctors are proceeding to treat cases of carcinoma of the cervix in this totally inadequate manner without even taking the trouble to remove a generous cuff of vagina along with the uterus.

To those who have not had the time or opportunity to study carefully the literature on the subject, it must be emphasized that the standard treatment of cervical carcinoma is still by radiation; that surgery is giving equally good results when done for Stage I cases by experienced pelvic surgeons; that nothing less than radical hysterectomy has any place in treatment, even for these Stage I cases and this includes removal, not only of the uterus and adnexa, but the upper half of the vagina, a wide section of the parametrium on both sides (necessitating meticulous exposure of the pelvic course of the ureters) and the iliac and obturator lymph nodes. Some more extensive cases can be dealt with by one or other form of pelvic exenteration procedure, which obviously must be performed only by surgeons of wide experience. Total hysterectomy alone is only of any value for

proved in-situ cases and it is never to be selected for invasive carcinoma.

The search for the basic disorder underlying pregnancy toxæmia continues but the ultimate cause of this disease remains elusive. One of the most thoughtful articles to appear recently on the subject is by F. J. Browne¹³, whose name has long been associated with the study of pre-eclampsia. As he sees it, the syndrome of pre-eclamptic toxæmia, including oedema, hypertension and albuminuria can be caused by an extreme degree of the overaction of the anterior pituitary lobe and of the adrenal cortex that normally occurs in pregnancy. The oestrogens produced in large amounts by the placenta bring about hypertrophy of the anterior lobe of the pituitary with consequent increased secretion of corticotrophin. The placenta itself also produces corticotrophin. As a result, hyperplasia of the adrenal cortex ensues, with the secretion of excessive amounts of glucocorticoids and mineralocorticoids and the consequent retention of sodium, chloride and water. It is true that the adrenal cortex in normal pregnancy, as in Cushing's syndrome, produces a blood-pressure-raising hormone. But every pregnant woman does not become hypertensive because the normal placenta and decidua contain a mono-amine oxidase that inactivates vasoconstrictor amines. The activity of this enzyme is decreased by a diminution in the oxygen tension of the medium in which it acts. In the article corresponding to the present one in the Review two years ago, mention was made of the work demonstrating the reduced placental blood flow in pre-eclamptic patients. This means that the oxygen tension within the placenta is reduced and pressor substances are therefore not destroyed. This is in contrast to what happens in normal pregnancy, and it has actually been shown that while corticotrophin will cause hypertension in non-pregnant women, it does not do so in healthy pregnant women. A reasonable explanation is therefore afforded for the various clinical manifestations of pre-eclampsia. The basic abnormality appears to be a reduction of placental blood flow. Further evidence in support of this view is afforded by Johnson and Clayton¹⁴ who studied the diffusion of radioactive sodium in normotensive and pre-eclamptic pregnancies. In the former the clearance rate was found to be significantly reduced, and to a degree proportional to the severity of the disease. The same workers were able to demonstrate a restoration of the reduced myometrial capillary blood-flow by the intravenous administration of hydralazine (Apresoline).

It was to be expected that the sodium-retaining property of the adrenal-cortical principle, aldosterone, would have led to the investigation of the possible role of this substance in causing the oedema of pre-eclampsia. Rinsler and Rigby¹⁵ found that the amount of aldosterone recovered from the urine of normal pregnant women rises

considerably as pregnancy advances. In pre-eclampsia, however, the urinary output of aldosterone is reduced, and these workers conclude that sodium retention and oedema must be due to some other agent. Martin and Mills¹⁶ found that aldosterone excretion in cases of toxæmia was no different from that of normal pregnant women.

Two years ago the oral diuretic acetazolamide (Diamox) was referred to in discussing the treatment of toxæmia. Since then an even more potent diuretic agent has become available, chlorothiazide. This drug causes a striking increase in urinary output and a consequent diminution in oedema. Finnerty et al.¹⁷ found that it also brings about a definite fall in blood pressure, and they consider it, in doses of one gram daily, as the ideal drug for the prevention and treatment of pregnancy toxæmia. It can be exhibited along with Veratrum or hydralazine and enhances the potency of these anti-hypertensive agents. Chlorothiazide can be used over long periods of time without danger of acidosis. Its principal action is the increased excretion of sodium and chloride but potassium is also lost from the body, though to a lesser degree. Its effectiveness does not decrease with continued use.

It is perhaps too much to claim that chlorothiazide alters the basic disorder in toxæmia. It can eliminate oedema and reduce the blood pressure but does it increase the placental blood-flow? For if it does not, then in spite of the patient's apparent improvement the foetus is still in jeopardy. Its rate of growth is less than normal and the danger of intra-uterine death is ever present. We may be misled by the amelioration of the usual findings of toxæmia into postponing the rescue of the foetus from its unfavourable hypoxic environment by inducing labour. The apparent effect of hydralazine upon placental blood-flow mentioned in an earlier paragraph merits further study.

An entity which has received considerable attention in the literature during the past year or more is incompetency of the cervix as a cause of habitual abortion. By this is meant that the cervix is not kept firmly closed during pregnancy but undergoes painless dilatation, usually in the middle trimester, with rupture of the membranes and subsequent abortion as a result. Sometimes one may happen to examine the vagina of such a patient with a speculum, when the sight of a bulging bag of membranes causes one hastily to withdraw the instrument. It is very unusual for the condition to occur in the first pregnancy; when it does, it suggests the presence of some developmental anatomical error or a disturbance of function. There is often a history of trauma to the cervix, such as amputation or a deep laceration at the time of a previous delivery. Green-Armytage and McClure Browne¹⁸ close the cervical canal by encircling the cervix with one or more nylon sutures, inserted through two small incisions on the anterior and

posterior lips at the cervico-vaginal junction. Labour is allowed to commence spontaneously and the sutures are then divided and removed. Bates et al.¹⁹ use a strip of fascia taken from the patient's thigh, instead of nylon, and before its insertion they displace the bladder upward off the cervix as high as possible. These authors advise delivery by Caesarean section. There may be hystero-graphic evidence of the condition in that there is a funnel-shaped cervical canal.

Very recently attention has been drawn to the development of partial virilism in female infants when the mother has received androgens in early pregnancy. The same effect may be produced by progesterone through its partial conversion into testosterone during its metabolism. Eighteen such cases are reported by Lawson Wilkins et al.²⁰ from the Johns Hopkins Hospital and three are described by Alan Moncrieff from the Hospital for Sick Children, Great Ormond Street, London²¹. Up to the tenth week of gestation the two sexes share the common indifferent genitalia, differentiation into male or female occurring in the next six weeks. The basic neutral structure is female, differentiation to the male form being brought about by the testis through its testosterone secretion. Androgens administered to the mother pass to the foetus and influence its external genitalia in the direction of maleness, so that pseudohermaphroditism is the result. It would appear wise, therefore, to defer such endocrine therapy in pregnancy until after the fourth month (when it is probably valueless, anyway).

J. F. Goodwin, from Hammersmith Hospital, London²² has reviewed a total of 136 cases of coarctation of the aorta associated with pregnancy, including 13 cases of his own. The mortality rate was 9.5 percent, or 13 deaths (although this number occurred in a total of 354 pregnancies). Seven of the deaths occurred in first pregnancies. Nevertheless the author believes the mortality rate of coarctation in pregnancy probably does not exceed that of coarctation alone. The two commonest single causes of death were aortic rupture and aortic aneurism. While pregnancy does not confer an added risk to patients with uncomplicated coarctation, the presence of added heart disease markedly increases the risk. Of the thirteen patients who died, eight had cardiac lesions. The hazards are heart failure and bacterial endocarditis. Therefore if severe heart disease is present termination of the pregnancy is advised. The uncomplicated case should be permitted to have a vaginal delivery at term. If an aortic aneurism develops, resection of the coarctation can be done during pregnancy.

Mitral valvotomy in pregnancy is discussed by Geoffrey Wade et al.²³. Twelve cases are reported and the conclusion is that pregnancy does not increase the operative risk nor the foetal mortality. In suitable cases valvotomy is preferable to ter-

mination. In women who have already undergone valvotomy prior to pregnancy, six months should be allowed following operation before assessing the patient's fitness for pregnancy. As a general rule pregnancy is safe for these women.

A great deal of effort is being expended in the search for a simple and effective contraceptive that can be taken by mouth. In the Oliver Bird lecture given in London by Dr. Gregory Pincus²⁴ a description was given of a field trial in Puerto Rico, using the progestogen "Enovid." Some time ago it was demonstrated that progesterone can inhibit ovulation and prevent fertilization. The 19-norsteroids have a comparable result and are effective by mouth. The women in the trial were told to take one tablet daily from the fifth to the twenty-fourth day of their menstrual cycles. This dosage did not alter the length of the cycles nor the character of the flow. When the pills were taken faithfully as directed, no pregnancies developed. When the drug was stopped normal ovulatory cycles were resumed. Enovid, by virtue of its action in inducing a premature luteal phase is therefore an effective contraceptive. Its sole disadvantage is its high cost.

As stated in the introduction, these notes have

no pretensions to being a complete presentation of current advances in Obstetrics and Gynaecology. They merely reflect the writer's interests from an extremely large volume of literature dealing with this particular field. It is hoped that enough has been included to indicate some of the modern trends of thought.

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Medicine

Year's End Review of Arthritis, 1958

R. H. McFarlane, M.D.

The following paragraphs represent a very incomplete review of some aspects of the subject that the writer has found interesting. No attempt is made to cover the subject completely, or to try to review anything like the whole volume of work published in the year. This function is undertaken periodically by a committee of the American Rheumatism Association, and the Rheumatism Reviews are published in the *Annals of Internal Medicine*.

Gout

In 1957, Talbot published his monograph, "Gout."¹ This is an excellent and inexpensive book, compact and yet containing full information on all phases of this condition up to the date of publication. There is little to add to this at the present time.

Colchicine is still considered the best agent for the treatment of the acute attack. Properly used, it brings effective relief in the vast majority of cases who are able to tolerate it. Phenylbutazone (Butazolidine) is a second choice, and may be used alone or in conjunction with colchicine. A.C.T.H. or other steroids are considered much less suitable. Recently Neustadt² has reported on the use of desacetylmethylcolchicine (Colcemide) in acute gouty arthritis. His conclusions based on a limited number of cases, were that relief equal to that of

colchicine could be obtained regularly, but without the undesirable gastro-intestinal effects of the latter. However, other and more serious toxic effects have been noted: granulocytopenia, anemia, and total alopecia.

For interim therapy, a combination of colchicine, 0.5 mgm. once or twice daily along with probenecid (Benemid) in doses of 0.5 to 2.0 Gm. daily, is advised. If conscientiously carried out, this regimen can produce a marked reduction in the frequency and severity of attacks. In some instances pre-existing tophi have regressed in size and even disappeared. Some of the deformities due to chronic tophaceous gout have been improved by this means. Early fears that the use of Benemid might result in an increased incidence of acute attacks in the first few weeks of therapy, or that the consequent increase in urate excretion might cause an increased incidence of uric acid renal calculi, have proven groundless.

The major effort in research in this field has been concerned with the elucidation of pathways of purine metabolism and the formation of uric acid in the body. It has been shown that the increase in the serum levels of uric acid, and the increase in the miscible urate pool in the tissues is due to increased formation of uric acid, and not to any decrease in its excretion, or interference with renal excretory mechanisms. It has also become apparent that the source of uric acid

precursors is endogenous purine bodies and not directly from the exogenous purines of the diet. Hence, there now appears to be less reason for dietary restrictions than we used to believe, except when multiple acute attacks are occurring.

Rheumatoid Arthritis

I. The Rheumatoid Factor

The past several years have seen much interest in serological reactions in patients with rheumatoid arthritis, and these depend on a substance known as the rheumatoid factor. This has been shown to be a protein, identifiable as being in the gamma globulin fraction of the serum. It has not yet been completely characterized, but the methods of testing for it show positive in only 4-5% of unaffected individuals. However, there is an increased incidence of positives in unaffected relatives of rheumatoid patients.

In the 1930's the streptococcal agglutination test was found to be positive in a considerable proportion of rheumatoid patients, and at the time, this was taken to indicate that hemolytic streptococci played a causative role in the disease. In retrospect, it now appears that this reaction had to do, not with the streptococci per se, but with the rheumatoid factor, as yet unsuspected.

In 1948, Rose and Ragan³ et al, described the agglutination of sensitised sheep erythrocytes by the sera of rheumatoid patients, and in the next few years, many different methods of doing these tests were devised. In 1956, Singer and Plotz⁴ described their Latex Fixation Test. In this, particles of polyvinyl toluene latex were substituted for the sheep cells. When the latex particles were of appropriate size, and in appropriate density of suspension, the rheumatoid patients showed a clearly recognizable agglutination reaction. These investigators reported 71.3% positive tests in rheumatoid arthritis, with a small smattering of false positives, of the order of 1-3% in other diseases and 5% in systemic lupus erythematosus. More recent refinements are said to produce results up to 98% positive in clinically identifiable rheumatoid arthritis. Marie-Strumpell's Disease, or rheumatoid spondylitis gives consistently negative results except in the presence of peripheral joint involvement, and curiously, psoriatic arthritis, often indistinguishable from rheumatoid clinically, also gives negative results. Systemic lupus erythematosus often produces an arthritis very similar to the rheumatoid variety, and significantly, the highest incidence of false positives occurs in this disease.

The latex fixation test and the bentonite agglutination test are now available at the Provincial Laboratories. However, there are some limitations as to the value of these tests. Since most cases of advanced or severe rheumatoid arthritis are easily recognized clinically, a diagnostic test is not necessary. It is not yet known how early in the course of the disease the results may be expected to be consistently positive, and it may happen that the

very cases where diagnostic help is needed are those in which it is not forthcoming. Probably a negative test in a patient with long standing arthritic complaints would be of more significance, in excluding the disease or suggesting a diagnostic re-evaluation.

II. Therapy

a) **Gold.** There has been a renewed interest in the use of gold salts in the treatment of rheumatoid arthritis because of the long term defects in steroid therapy. Smith⁵ et al, recently reported remissions in 82% of their cases treated with individualized gold schedules.

b) **Antimalarial.** The recent advocacy of Chloroquine (Aralen) for rheumatoid arthritis has led to its widespread use in this and many other conditions. Cohen and Calkins⁶ have recently published a short term controlled study of twenty-two cases, and in these, some anti-rheumatic activity was noted in 70-80% depending on the criteria used for measuring improvement. Only 6% of the controls improved in the same way. They stress the possibility of toxic reactions and indicate the need for more long-term studies before the status of Chloroquine as a useful therapeutic agent can be established.

c) **The Newer Steroids.** Since the advent of the "meti-steroids" prednisone and prednisolone, several others have made their appearance, and still others may do so soon.

Triamcinolone, (delta-1, 9 alphafluoro, 16 alpha hydroxyhydrocortisone) marketed as Aristocort or Kenacort, has been available for general use for some months. Experience with this substance has recently been reviewed by Freyberg et al⁷. On a weight for weight basis, it is slightly more potent in its anti-rheumatic effects than prednisone or prednisolone, 4 mgm. being the equivalent of 5 mgm. of the older two. There are some differences in metabolic activity and side effects between this and the previously available steroids. Triamcinolone does not cause sodium retention as do cortisone and hydrocortisone, but rather sodium loss to a small extent, and occasionally may lead to troublesome dehydration. Perhaps, because of this feature, it may cause a reduction of pre-existing hypertension rather than the reverse. It does not tend to stimulate the appetite like the older steroids, and may depress it. Under some circumstances this drug may cause a negative nitrogen balance. Weight reduction on this steroid may be attributable to appetite loss, some catabolism of protein and chronic dehydration. Some side effects such as headache, dizziness, sleepiness are more likely to occur with triamcinolone, but others such as hirsutism, moon-face, supraclavicular fat deposits, decreased glucose tolerance, and increased calcium loss are similar to those produced by the older steroids. In a general way for most patients, it is thought to have little more to offer than prednisone or prednisolone.

Boland and Liddle⁸ have reported investigative studies on 6-methyl prednisolone, (Medrol). There was little to choose between this substance and prednisolone itself in metabolic or clinical effects. In doses up to 15 mgm. daily, there was no sodium retention, and some potassium loss. Fifteen mgm. of each was estimated to cause complete inhibition of pituitary-adrenal function. The data suggested that the newer substance might be slightly more potent in its anti-rheumatic effects than prednisolone, but the tests were not conclusive. So far as could be determined, undesirable side effects were not significantly different, although no conclusions were drawn regarding such late-occurring unwanted effects as peptic ulceration or osteoporosis.

Dexamethasone, (delta-1, 9-alpha fluoro, 16-alphamethylhydrocortisone) is not yet available, but may shortly be marketed as Decadron or Deronil. Reports of early studies have been reported by Bunim, Black⁹ et al. In its ability to suppress plasma levels of hydrocortisone, it is thirty times more powerful than prednisone, but its anti-rheumatic effect is about six times that of prednisone. Clinical studies which would allow a proper appraisal of this new drug have not yet appeared.

Several other new steroid compounds are now under biochemical and clinical investigation. In respect to these, as well as the ones mentioned above, one might well quote a few sentences from the discussion of Bunim and Black in their paper on Dexamethasone. "Increased anti-rheumatic potency per se is no real advantage. What is needed is an agent that possesses a higher therapeutic ratio. Whether prolonged Dexamethasone administration will continue to suppress effectively disease activity and yet not give rise to serious toxic effects is the primary question. At least one year, and more likely several years of careful observation will be necessary to answer this question."

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A Review Of Pancreatitis*

R. A. Polson, M.D., F.R.C.P. (C)†

Few other organs are as inaccessible to clinical, radiological or biochemical examination as the pancreas. For this reason, pancreatitis may be overlooked in the early stage of an acute abdominal illness. This is unfortunate, as it is in this stage that diagnosis and treatment is most important.

The purpose of this paper is purely clinical. The material surveyed is the experience of the Winnipeg Clinic over the past eight years. During this period, forty-four cases were observed.

Criteria for inclusion in this survey were:

1. Surgical or post-mortem proof.
2. Radiological evidence of calcification.
3. Significant elevation of the serum amylase with a supporting clinical syndrome.

Cases diagnosed on clinical grounds alone and pancreatic diseases of children (mumps, cystic fibrosis) were excluded.

Classification

As these cases were reviewed, four fairly well-defined groups became apparent, calcific pancreatitis being considered as a heterogeneous group. (Table I). These groups have been reviewed separately for the most part.

Table I

Associated Disease:	Acute Pancreatitis	Calcific Pancreatitis
Biliary Tract _____	27	2
Alcoholism _____	7	2
Undetermined _____	3	3
Total _____	37	7

Although this classification is one of clinical expedience only, it points out the strong relationship that has been known for some years to exist between alcohol, biliary tract disease and the pancreas. Cholelithiasis has been linked to pancreatitis since Opie¹ proposed the "common-channel" theory in 1901, and has received much attention since this time. Alcohol was first associated with pancreatic pathology in 1878². More recently, many papers have dealt with possible causative mechanisms and extensive reviews of the literature³⁻⁷.

Although this is not necessarily an etiological relationship between the pancreas, alcohol and biliary disease, this is of considerable clinical value in that such a history should constantly remind us of the possibility of this disease.

Clinical Diagnosis

It is impossible to establish a diagnosis of pancreatitis on clinical grounds alone. However, upon reviewing the series, certain features do stand out (Table II). It is obvious that any or all of these

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Table II
Symptoms and Signs

	No.	%
Pain	36	100
Tenderness	30	83
Vomiting	28	77
Clinical Ileus	27	75
Jaundice	9	25
Shock	6	8
Mass	6	8

symptoms could occur in other diseases such as acute cholecystitis, perforated ulcer, bowel or common duct obstruction, appendicitis and acute vascular disease.

Pain, found in all cases, in this series, is usually epigastric and about 50% have radiation to the upper quadrants and the back. In a few cases, pain may be felt only in the right or left lower quadrant. There have been reports, however, of painless pancreatitis⁸. Jaundice occurred in 25% of this series, although all but one case occurred in those associated with biliary tract disease. No case of jaundice occurred in the unexplained group. Shock occurred more frequently in the alcoholic (42%) than in the group associated with biliary tract disease (11%). This is a grave sign in pancreatitis.

Other Clinical Features of Acute Pancreatitis

Age—In general, the average age was in the fifties although one case (alcoholic) occurred as early as 26 years.

Sex—In association with biliary disease, the sex distribution was even—13 males and 14 females. Among the alcoholics, 5 males and 2 females. The cases of undetermined origin were in males.

Previous Pain—occurred in almost all cases associated with biliary tract disease and five cases of this group had previous cholecystectomies and developed acute pancreatitis years later. Most patients described this as colicky pain, but some reported attacks of deep, constant pain. This undoubtedly forms a part of the "post-cholecystectomy syndrome."

Laboratory Findings

The greatest single laboratory aid to the diagnosis of acute pancreatitis at present is the amylase estimation. If performed within the first 48 hours of onset it may be elevated above 200 Somogyi units in 80% of cases at some time, although more than one test may be necessary. A measurement within the normal range certainly does not exclude pancreatitis. As well, significant elevations have been reported in other conditions where the pancreas is quite normal. These include renal disease⁹, perforated ulcer¹⁰ and the administration of drugs (morphine, codeine and Demerol¹¹).

One patient in this series was not seen until 3 days after the onset of pain. The serum amylase was normal, but aspiration of a small amount of free peritoneal fluid revealed a concentration of

amylase of 200 u/ml. This test is invaluable where fluid is present and the diagnosis in doubt.

Other Laboratory Findings

1. Transient albuminuria in the acute stage (30%).
2. Glycosuria and hyperglycemia (20%). This is of some prognostic significance, as these were the most severe cases in this group.
3. Polymorph. leukocytosis may occur up to 18,000. This finding had no correlation with either the severity of the disease or the appearance of complications.

Hypocalcemia did not occur in this series. This complication may appear after the third day and indicates a serious prognosis when the calcium falls to 7 mgm%¹².

A method of estimating the serum trypsin¹³ has recently been reported and this is at present under investigation.

Radiologic Examination

Cholelithiasis was known to be present in 13 cases. Adynamic ileus occurred in 3, and gas at the splenic flexure (colon-cutoff sign¹⁴) in three. Duodenal dilatation was seen in only one case. An unusual finding was complete obstruction at the splenic flexure when a barium enema was given. This proved to be adhesion to the inflamed pancreas. On the whole, the radiological aid was of no specific value other than in a negative sense—the absence of free peritoneal air.

Clinical Course and Therapy

At this point, the series of acute pancreatitis must be broken up to follow the associated diseases (Table III).

Table III
Initial Treatment
Acute Pancreatitis

Type:	Medical	Deaths	Surgical	Deaths	Total
Alcohol	3	2	4	1	7
Undetermined	2	0	1	0	3
Biliary Dis.	9	1	16	2	27

In the alcoholic and undetermined types, five underwent surgery and five were medically treated. All surgical cases were considered to be acute cholecystitis pre-operatively. The two medical deaths were in shock upon admission, and autopsy revealed hemorrhagic pancreatitis. The surgical death occurred in an alcoholic three weeks after laparotomy and was due to acute hepatic necrosis complicating the oedematous pancreatitis.

Of the 27 cases associated with biliary tract disease, three deaths occurred. That listed as "medical" occurred in a patient also suffering from acute lymphocytic leukemia. One of the surgical deaths developed acute hemorrhagic pancreatitis immediately following dilatation of the common duct for stricture. The second died six days after laparotomy for suspect appendicitis. Peritonitis was present in both cases.

The extremely high death rate in the alcoholic is striking, almost 50%. The mortality rate in the

group associated with biliary disease was 11%, which compares favorably with other series. On review, there appeared to be little doubt that the "medical" deaths were moribund when seen. The overall "surgical" mortality rate of 13% appears to be an improvement over earlier reviews where a mortality rate of 20-25% was accepted as usual. This improvement is no doubt due to better operative and post-operative care and to the wide use of antibiotics. Certainly early surgery is not ideal, but is not as dangerous as in the past, particularly when operative diagnosis is prompt and nothing more than laparotomy undertaken if this is feasible.

There is also an associated morbidity which must be considered. This may occur with or without surgery (Table IV).

Table IV
Morbidity

Abscess	4	(2 alcoholics)
Pseudocyst	2	
Fistula	2	
L. Bowel Obst.	1	

None of these conditions led to a fatal outcome. Three abscesses were drained with early recovery. One pseudocyst was drained externally and resolved in seven days, the other was treated medically. Both these patients developed diabetes, suggesting extensive pancreatic destruction. Fistula occurred in 2 cases, one following drainage of an abscess and continuing for three months. The second followed open biopsy at laparotomy. This fistula drained for three weeks and is an example of the reason why biopsy by scalpel should be abandoned. In contrast, biopsy in questionable cases using the Vim-Silverman needle has yielded extremely good results in differentiating carcinoma from pancreatitis. Multiple biopsies may be done at one time, and so far there have been no reports of morbidity due to this procedure.

Chronic calcific pancreatitis appears to be a heterogeneous entity regarding etiology (Table I). All three types are represented. This group represents the late outcome of recurrent acute interstitial pancreatitis—multiple attacks, usually mild and of short duration occurring over several years. The attacks when seen are as typical as the other groups with the same symptoms and signs. However, elevation of the serum amylase has on no occasion been demonstrated in this group. Pancreatic insufficiency was evidenced by the occurrence of diabetes mellitus in 5, and steatorrhea in one case.

Management of Pancreatitis

The management of pancreatitis should be medical unless there is some complicating feature urgently requiring surgical intervention. This imposes the burden of early and accurate diagnosis. It is suggested that in every patient with acute abdominal pain where no definite diagnosis can be made, a serum amylase test be ordered as rou-

tinely as an x-ray film of the abdomen. Once the diagnosis is suspected, there are clear-cut lines of medical treatment. The first active measure is the replacement of blood and fluid volume. It has been estimated that the "average" case of pancreatitis requires some 2000 c.c's of fluid at the time of admission to hospital. This loss comprises blood loss, fluid loss in oedema and through vomiting and ileus. The best results have been obtained when a portion of this is quickly given as whole blood, the remainder as electrolyte solutions intravenously.

If there is any indication of impaired carbohydrate metabolism, insulin in small doses should be administered whenever glucose is given. It is safe to administer 10 units of insulin with each liter of 5% glucose solution. Higher doses may be used only where blood sugar estimations can be performed readily, as hypoglycemia is an added danger. The second step is to put the pancreas at rest by all possible means. First, a gastric suction must be established and nothing given by mouth except antacids, in small doses injected down the tube at hourly intervals. By these means, acid is neutralized or removed by suction. This prevents the secretin phase of pancreatic stimulation. Atropine or other anticholinergic drugs¹⁶ may be used parenterally. It is doubtful if these prevent nervous stimulation of pancreatic secretion, but they may relax spasm of the sphincter of Oddi and decrease gastric acidity.

The treatment of pain is preferably managed by Demerol, which causes less spasm than morphine. Where pain is unremitting, epidural block has been used successfully¹⁷.

Broad spectrum antibiotics should be given, particularly in the patients with diabetes or alcoholism, as the incidence of complicating infections is highest here. These may be given intravenously.

Surgery is to be avoided in the early stages. However, in those with complicating acute biliary tract disease it may be necessary. Preferably a period of two months at least should elapse between an attack of pancreatitis and definitive surgery for biliary tract disease. Even after this length of time the pancreas may still be swollen and hard.

Attacks of pancreatitis following cholecystectomy by an appreciable length of time should be carefully investigated with regard to residual biliary disease. One patient in the chronic group had recurring attacks of pain for 30 years following cholecystectomy and ultimately developed pancreatic calcification. A common duct stone producing no discernible obstruction was visualized by intravenous cholangiography and removed four years ago. Although she is now diabetic, she has had complete freedom from pain up to the present time.

In summary, 44 cases of pancreatitis in adults have been reviewed. This group was associated with:

- | | |
|--------------------------|-----|
| 1. Biliary tract disease | 66% |
| 2. Alcoholic history | 20% |
| 3. Undetermined etiology | 14% |

The disease is more common than suspected, and since the serum amylase is a readily available test, this should be done more frequently in the investigation of the acute abdomen.

A history of alcoholism carries with it the highest mortality rate, 43%; while deaths with associated biliary tract disease occurred in only 11% of patients.

Treatment should be medical whenever possible and an outline of this therapy has been presented.

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Remarks At A Dental Luncheon*

I. Maclaren Thompson

B.Sc., M.B., Ch.B. (Edin.), F.R.S.C., F.R.S.E.
Professor of Anatomy and Head of the Department
University of Manitoba

The Manitoba Dental Association has chosen a delightful way of celebrating this important occasion, and I am sure that the large number of guests here present appreciate very warmly this gracious action by our kind hosts.

We are gathered here to celebrate the day on which Manitoba starts to train her own dentists—exactly three-quarters of a century after she began to train her own doctors. The seventy-five years separating the founding of the Manitoba Medical College from the inauguration of the Faculty of Dentistry have led to some interesting differences between the beginnings of the two professional schools.

The presence here of certain distinguished guests betokens that the Faculty of Dentistry is being instituted as a matter of governmental policy, the University being the natural instrument for implementing that policy. How different in 1883; neither the Government nor the University instigated the founding of the Manitoba Medical College. A handful of Winnipeg doctors not only generated the necessary driving force, but managed the details successfully, and that at a time when Winnipeg had been a city for only ten years; Manitoba as a province was but three years older, and in size was intermediate between its original "postage-stamp" dimensions and its present magnitude. However, it was not a Faculty of Medicine that was founded in 1883—it was an independent institution, the Manitoba Medical College, and so it remained for thirty-six years; not until 1919 did it become the Faculty of Medicine of the University of Manitoba.

About that time (and somewhat earlier) that sort of thing was widespread throughout this continent, especially in the United States—separate medical schools were surrendering their independence and becoming university faculties of Medicine. I do not know the history of dental schools, so I shall stick to Medicine for the moment. Why did so many medical schools become medical faculties of universities? In my opinion it was primarily because the experience of their graduates showed that if Medicine is to continue to be a "learned" profession, and to maintain its position in the community, professional knowledge and competence must be permeated (not merely preceded) by the kind of general education that is the business of a university. In other words, university standards can be ensured only in a university. Of course there

are some notable exceptions to this last statement, but they do not invalidate the generalization.

Happily, this is the point at which our Faculty of Dentistry is beginning its history. This is a great challenge and a great opportunity, which I should like to illustrate by brief reference to the Johns Hopkins Medical School. The Johns Hopkins University is but one year older than the University of Manitoba; the Johns Hopkins Medical School is ten years younger than the Manitoba Medical College. How long did it take the Johns Hopkins Medical School to become famous? It had an international reputation on the day it opened its doors. This is the day on which the Manitoba Dental School opens its doors. Should it not at once take a position in the front rank of dental schools? The Hopkins has shown that this can be done—not by imitating other institutions, nor by being too fearful of licensing bodies, but by boldly doing things as we believe they should be done in this Faculty, by living up to our own ideals as nearly as possible.

In the first year of our new dental course Anatomy looms large—some would say too large! When most doctors and dentists think of Anatomy they naturally think of it as they were taught it. I should therefore like to mention, especially to our hosts, the dentists, some of the features of the anatomical study planned for our dental students. In this connection I may mention that for seven years I taught Anatomy to dental students at McGill University, so I am not completely inexperienced in this field.

The central idea animating our teaching is that Dentistry is essentially a branch of the healing art. Therefore our first year dental students will study Anatomy along with our medical students; both groups will attend the same lectures and will work together in the laboratories. To begin with, they will study General Anatomy, i.e., the Anatomy of structures found all over the body, such as cells, tissues, bones, joints, muscles, nerves, vessels and skin. Next will come regional study of the chest and of the head and neck. Then the dental students will leave us, while the medical students proceed to study the rest of the body. Special courses in Dental Anatomy and Oral Histology are arranged by the Faculty of Dentistry, but members of the Department of Anatomy may participate. In the second year the dental students will return to us for some advanced instruction on anatomical topics of special concern to dentists.

In concluding, may I be allowed to say how lucky I am to be young enough to participate in this venture—another ten years and I should have missed it! Today we are not reading History, we are making it. May the History that is being made here and now make good reading in the years to come.

*Given by the Manitoba Dental Association, at the opening of the Faculty of Dentistry of the University of Manitoba, September 8, 1958.



Editorial

S. Vaisrub, M.D., M.R.C.P. (Lond.), F.R.C.P. (C.), F.A.C.P., Editor



The Point of the Needle

One of the favourite pastimes of Medieval Scholasticists was the indulgence in idle speculation upon the number of angels that could dance in comfort on the point of a needle. Absurd as it may seem to us now, to them the point of the needle represented the ultimate in the minute, the borderland between the visible and the invisible, the junction of the material with the spiritual.

It would almost seem that the modern pathologist sectioning a leucocyte into 800 parts or viewing a ferritin molecule under a magnification of 500,000 times is fast approaching this very end point. With his ultracentrifuge and ultramicroscope he is ushering in the "molecular" phase in Pathology.

It is tempting whenever Pathology, and with it Medicine, enter a new phase, to review, or, at least, make a passing reference to the phases that preceded it. The temptation becomes irresistible when fate takes a hand and throws a pertinent centenary onto the editorial platter. In this case the centenary is, of course, that of the publication of Rudolph Virchow's "Cellular Pathology" in 1858, a date which marks the beginning of the era of cellular pathology.

It would be best, perhaps, to begin at the beginning. Pathology dates its official birth to 1761 when Giambattista Morgagni, professor of "theoretic" medicine in the University of Padua, published his classical "De Sedibus et Causis Morborum libri quinque." In this historic work he introduced the principle of localization of disease in structural units in contradistinction to the prevailing traditional humoral concept. Since to Morgagni the smallest structural unit was the organ, his pathology was the pathology of organs. With the advancement of investigative techniques, the "Sedes Morborum" began to move to smaller units. In 1800 Francois Xavier Bichat of the Hotel-Dieu in Paris shifted in his "Traite de Membrane en general" the emphasis from organs to tissues. This marked the beginning of the era of tissue pathology, which prevailed until 1858, when it was superseded by the cellular pathology of Virchow, for whom the sick cell was the site and the essence of disease and the microscope the key to its understanding.

It is difficult to overestimate the influence of Virchow on teaching and research in pathology. He was the acknowledged leader in the field during his lifetime until his death in 1902. Even after his death, when many of his views have fallen into disfavour, no one disputed his greatness and the value of his contribution to the advancement of Pathology and Medicine.

The decline of cellular pathology at the turn of the century was due partly to the apparent exhaustion of information anticipated from further

study of cellular morphology — the microscope was squeezed dry—, and partly to a dissatisfaction with the narrowness of the philosophy underlying the concept that the body is nothing more than a collection of autonomous cells. Newer and more comprehensive, albeit somewhat nebulous, theories with broader viewpoints and "holistic" approaches, embracing the "whole" man, sprouted and took hold of the imagination. Morphology was dethroned. The microscope, no longer the magic key and wonder tool of research became just another diagnostic instrument in routine laboratory investigation.

As it often happens in Medicine, however, new techniques and new instruments, gave new life to an old discipline. The techniques of tissue culture, X-ray analysis, microscopic spectrophotography, microdissection, paper electrophoresis, micromanipulation, and the invention of the ultra-centrifuge and the electron microscope reawakened morphology. They brought a wealth of new knowledge about the structure, chemical composition and biochemical activities in the cell. They shed new light on the architecture and function of the cytoplasm with its organelles and inclusions in all their dazzling complexity. They advanced the understanding of the nature of viruses, the structure of genes, the etiology of obscure diseases of abnormal hemoglobin and of others at the "molecular" level.

On a more down to earth practical level the ultra instruments promise to be of help to the physician in his daily task of diagnosis. They can enhance the accuracy of his observations on the microanatomy of organs, made available by modern biopsy techniques. "Electronmicroscopy"—write Folli et al . . . (Ann. of Int. Med. 49:4, 792)—"is becoming a necessary tool for the pathologic evaluation of many renal diseases, and particularly for the study of the early lesions seen in renal biopsy specimens."

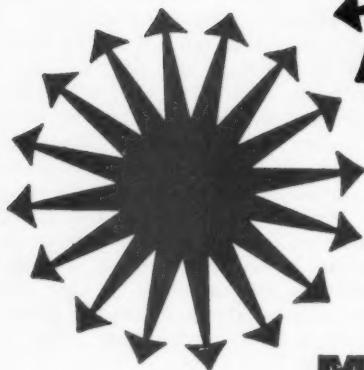
At the resolving power of ten Angstroms almost all organic molecules become visible. In the case of iron, which is opaque to electrons, it has even become possible to perform chemical studies at the molecular level. A new era in cytophysics and cytochemistry is being inaugurated. "At the level of ten Angstroms"—states Marcel Bessis (Editorial "Blood" April 1958)—"morphology, physiology and biochemistry meet on common ground."

The ultramicroscope and ultracentrifuge are powerful weapons of Research. They have a longer range than any of the "conventional" weapons hitherto in use, and reach further into the terra incognita beyond the boundaries of present knowledge. They penetrate deeper into the mysteries of the ultra structure and ultrafunction of the smallest units in the quest for the forever elusive "Ne plus Ultra."

Ed.

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OUR PRESIDENT, 1958 - 59

Edward Johnson was born at East Kildonan, Manitoba, on January 15th, 1902. Following elementary high school and pre-medical training, he enrolled in the Faculty of Medicine, University of Manitoba, from which he was graduated with the degrees of Bachelor of Science, and Doctor of Medicine in 1928. The same year he received the Licentiate, Medical Council of Canada, qualification. He became interested in psychiatry and for several years has been medical superintendent of the Hospital for Mental Diseases at Selkirk, Manitoba. He is a certified specialist in psychiatry, Royal College of Physicians and Surgeons of Canada, and a lecturer in psychiatry, Faculty of Medicine, University of Manitoba. A member of the Canadian and American Psychiatric Associations, he received Mental Hospital Achievement Award from the latter body in 1953, as recognition for the outstanding success of S.H.A.R.E. He is a member of the Manitoba Medico-Legal Society.

Doctor Johnson has been a consistent supporter of the Canadian Medical Association, the Manitoba Division, and the Winnipeg Medical Society. He is a Past President of the Psychiatric Section, Manitoba Medical Association. He has been an elected member of the College of Physicians and Surgeons Council for many years and was chosen President of that body in 1949-50. It was as representative of the College that he became an active member of the Executive Committee of the Manitoba Medical Association until he was honoured by election to the office of Second Vice-President of the Association for 1956-57, First Vice-President for 1957-58, and President for the current year.

This brief account does not do justice to other varied community activities in which he has been engaged, nor of his curling and golfing hobbies. He is married and has three children, two daughters and one son.

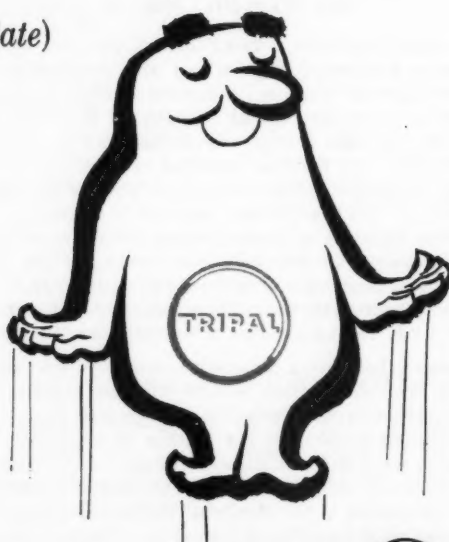


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Presidential Address

Dr. Arthur F. VanWart

President, Canadian Medical Association

During the last century medicine has made tremendous advancements, in fact recent decades have seen remarkable advancements. Parallel with these changes in medicine have been the expansion and betterment of hospital services. The hospitals have striven to have their facilities accommodate the advancements of medical knowledge. How different the hospital of today from that of a century ago. Hospitals began as a place of shelter for the aged and for the segregation of mentally deranged and infectious patients, both of whom were recognized as a menace to the public. The influence of religious orders in hospital development was present from the first, also public spirited citizens gave voluntarily of their time and money to hospital progress. In communities scattered throughout this land there were groups of voluntary workers imbued with the idea that their community must have hospital care, the best the resources and community could provide. Among these citizens were doctors who gave freely, hours of their time on Hospital Boards, where their advice was most valuable to their lay brethren. As there was a common pattern of development in all the local communities, it was felt there should be closer association among hospitals and thus the public spirited citizen became, not only interested in his own local hospital, but began to serve on boards at the provincial and national level. Many medical men accompanied their lay brethren into this larger voluntary field. As the hospital movement grew, salaried officials entered the picture, but still the boards of management were on a voluntary basis and attracted public spirited men, leaders in their community.

Many years ago the C.M.A. was successful in interesting one of the large Life Insurance Companies in the creation of a hospital department in the C.M.A. with a permanent secretary who was available to all the hospitals in a consultant capacity. This proved a most valuable service and continued as a C.M.A. service for several years. Out of the Department of Hospital services of the C.M.A. the Canadian Hospital Association originated and they absorbed the Hospital department of the C.M.A.

After the creation of the American College of Surgeons, there developed a hospital inspection service which raised considerably the standard of hospitals, especially the smaller ones. The C.M.A. for the last eight years has been deeply involved as a member of the Joint Commission on Accreditation of Hospitals. In this work the C.M.A. has been associated with the American Medical Association, the American College of Surgeons, The

American Hospital Association and the American College of Physicians. The particular needs of Canadian Hospitals along with the recent activities of our governments in hospital care insurance have impelled us to establish on a national basis a truly Canadian accreditation programme. In co-operation with the Canadian Hospital Association, the Royal College of Physicians and Surgeons of Canada, l'Association des Medecins de Langue Francaise du Canada, the C.M.A. is a full partner in the Canadian Council on Hospital Accreditation. As of January 1, 1959, this agency will undertake the accreditation of Canadian Hospitals and will be the sole agency in the field in this country. It is our hope that official government agencies will continue to regard this Canadian Council as performing an essential service for Canada's hospitals and the people who occupy their beds, in a manner which is independent, expert and uninfluenced by considerations other than the patient's best interest.

Hospital costs are rising with enormous rapidity. The fact is that as a relief state monies are beginning to pour into our hospitals and in a very few months most of our provinces will have a hospital health scheme. This has created new problems for our hospitals and for the medical profession. Before looking at the impact of this development on the medical profession and what should be our policy of the future, let us just consider for a moment what would have been the position of the medical profession today if the hospital had not advanced parallel with the advancement of medical knowledge. There are many facets to the hospital advancement, but let us look at one. Suppose the hospital had not accepted and co-operated with the application of the medical principle of aseptic surgery. The acceptance of this principle has at many times strained the resources of the hospital. I remember as a boy, the first sterilizer installed in our local hospital. The money was raised by a baseball game between the doctors and the fat men of the community. Consider today the outlays of our hospitals in sterilizers, central supplies, operating rooms, laboratories and many other expensive items to maintain the principle of asepsis. Our medical predecessors saw the necessity of developing these services within the hospital and with the co-operation of public spirited citizens, succeeded beyond their fondest dreams. If they had failed, medicine would be like many other sciences waiting for a situation to be created so that its knowledge might be applied for the benefit of mankind. Our policy is outlined in a Statement of Policy declared in 1949.



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"Additional services should come into existence by stages, the first and most urgent stage being the meeting of the costs of hospitalization for every citizen of Canada. The basic part of the cost should be met by individual contribution, the responsible governmental body bearing in whole or part, the cost for those persons who are unable to provide the contribution for themselves."

Today we are faced with the state becoming interested on a large scale in our hospitals. It is to the credit of our governments throughout the land that they have left the hospitals in the hands of the local boards of management. These boards are composed of the people who have been responsible for the parallel advancement of the hospital with the medical knowledge accumulated throughout the century. Our first effort should be to retain the interest of these men. These men are successful in their own businesses and bring to Hospital Boards mature judgment. A fear exists in my mind that there might be state interference and inevitably these men will tend to withdraw and then there enter the paid trained hospital specialists on these boards with a different viewpoint. Their viewpoint is the management with money at hand and not the progressive viewpoint of the voluntary worker who says we must have this and goes out to raise new monies without delay. The viewpoint of the voluntary worker is that of giving public spirited service uninfluenced by his own livelihood. Mind you, there are public spirited salaried men on the hospital boards who are the leaders, but they are not in large numbers.

Our medical men on boards have the responsibility of keeping our lay friends interested in the progress of our hospitals. Medical men have the responsibility to see that medical men assume their position in government service, on health commissions and in the political life of our communities, so that the new medical knowledge can be brought and applied in our hospitals at the earliest possible time, and also to see that our hospitals are giving good modern service to our communities in a manner that commands itself to those receiving and giving the services.

To accomplish this the Canadian Medical Association must work in closest co-operation with all the national bodies interested in hospital work. The C.M.A. must be ready to advise them, and to do this, must give very close study to the changing hospital situation. The C.M.A. is dependent on its Divisions, the Divisions must be alive to the hospital problem and at their level be prepared to help our hospitals and also to give the C.M.A. the full benefit of their experience. At the Division level it is necessary to enter this picture as one interested in the institution of his community and endeavouring to make it an institution giving maximum benefit to his community. In the preservation of this attitude lies the future success

of our hospitals and an assurance there will be a parallel development of our hospitals with that of increased medical knowledge.

Governments were forced to enter the hospital field by the rising costs of medical care, the people demanding some relief from the high cost of catastrophic illnesses. Many factors enter into the causes of this serious cost rise but today I only wish to mention the medical facet. The putting of new medical discoveries into practice has been an expensive procedure and we, as medical men, have not given study to finding the most inexpensive way of putting these discoveries into effect.

Governments after they have established the hospital plans will inevitably begin to study how to stabilize the present costs and even the reduction of them. This behooves us to see that medical advancement is not delayed by the introduction of methods to solve these costs. We should first of all give study to the influence of medical procedures on costs. New medical methods usually entail the purchase of expensive equipment, usage of expensive laboratory techniques, treatments with expensive drugs and methods of therapy. An intravenous procedure in itself is a simple, inexpensive method but ask any of your plans to give you a monthly cost to the plan of this method of treatment, and their I.B.M. machines will astonish you at the size of the figures. Studies may reveal less expensive methods that will give the same results. The thorough investigation of a patient's illness and the utilization of all diagnostic methods, have become general practice. More reliance is put on these methods than on the clinical judgment of doctors. The specialist says he cannot afford to miss anything. The patient has been educated to expect these aids. More explanations to the patients why a procedure is ordered and less of the ordering of them for the sake of completeness would no doubt curtail the taking of some needless procedures. Our courts today place as much faith in the techniques and diagnostic aids, as in the clinical opinions of the medical man.

The problems of admitting, discharging of patients by the medical man play a large part in the hospital cost picture. Overutilization of hospital beds under a government hospital service plan is feared by the planners of these schemes. Complacency that in two or three years time it will adjust itself is not enough. We of the medical profession, who have now the control of this situation must continue to control it under more difficult circumstances. In many of our hospitals, with the prevalent bed shortage and long waiting lists, the medical profession set up committees to examine the whole situation as it applied to their hospital, with the result that admissions and discharges were supervised by a committee of medical men. Waiting lists became smaller, beds were better utilized, nursing and laboratory services

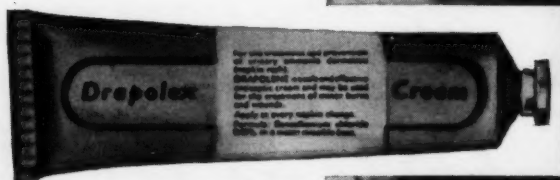
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speeded, and there were fewer emergency admissions.

It is advisable that doctors in the local hospitals now begin to study the admission and discharge problem in light of their Government Hospital Service Plan. Governments gladly welcome organization of local doctors to grapple with this problem. If we do not, then they will grapple with it. Citizens will make political pressures for admission and longer stays in hospitals. A new pressure we must be cognizant of in our thinking.

These are but few of the problems medical men must cope with if they wish to actively participate in the stabilizing or reducing of hospital costs.

The C.M.A. and Hospitals are also interested in the training of interns. The C.M.A. through the work of its Committee on Approval of Hospitals for the Training of Junior Interns has completely revised the basis of approval of those Canadian Hospitals which aspire to participate in this aspect of medical education. Our duty is to advise the senior student and recent graduate where he can obtain better than average supervised experience and instruction in the wide area covered by a rotating internship. The American Medical Association and the Royal College of Physicians and Surgeons of Canada both recognize it for their purposes. At the present time 72 Canadian Hospitals have been approved and they offer 1,150 junior internships. It is a requirement of most provincial medical licensing authorities that immigrant doctors whose credentials have been screened, devote at least one year to further training in a Canadian Hospital. Where better can these newcomers familiarize themselves with our methods and philosophy than in a supervised approved internship?

To sum up:

Independent Hospital Trustee Boards must be maintained, the best lay minds must be attracted to these boards, medical men must actively par-

ticipate on these boards as well as on the medical staffs and committees of the hospital.

The Canadian Council on Hospital Accreditation must be strengthened so that those giving grants will be satisfied that the type and quality of service given by the hospital commends itself to those giving and receiving the service.

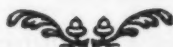
We must tackle the problem of rising hospital costs and in so far as it is possible, we must see that diagnostic medical treatments are carried out as cheaply as possible while giving the best medical care. Just as in industry, before any new process is introduced, cost studies are made and research endeavours to lower these costs to a minimum, so today the medical profession must be conscious of the necessity of introducing procedures on an economical basis and not just hasten to thrust them on the public.

The medical profession must continue to control the admission and discharge of hospital patients. Study must be given at this time to this urgent problem, not only at a local, but also at a provincial and C.M.A. level.

Medical men must assist Hospitals so that they shall meet the revised basis of approval of the Committee on Approval of Hospitals for the Training of Junior Interns.

Hospitals and hospitalization will be subjects of increasing public attention in the immediate future and for some time to come. We who utilize these hospital facilities in our daily work have an obligation to continue our interest and efforts. It is our duty to convey to our own publics the realities of hospital organization and financing with the assurance and knowledge which our position provides.

Before resuming my seat, I wish to express how happy I am to be with you today and to thank you for the courtesies you have extended to the members of the C.M.A. team, Mrs. VanWart and myself. I hope sometime in the future I may have the opportunity of again attending your meeting.



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Address to Manitoba Medical Association 50th Anniversary, October 7th, 1958

Hon. George Johnson, M.D.
Minister of Health and Public Welfare

Mr. Chairman, Gentlemen:

First of all, on behalf of the Government and the people of Manitoba, I wish to bring greetings to the Manitoba Medical Association on its 50th anniversary, and express the hope that you will both enjoy yourself and profit from your discussions. Knowing how active your officers are in Manitoba Medical Association, I expect this Convention to be the most successful in your history.

When asked to speak here today to so many of the medical men of our province, I accepted with all humility. I realize I have only myself to blame for suddenly finding myself changed overnight from the role of a general practitioner to that of the health ministry. I can assure you, I accepted this post with great apprehension. Now, as a novice, no one realizes more than I do, the many difficulties that confront me in this post, as the training for and practice of general medicine does not help in a heavy complicated administrative role. I can only hope that hard work and interest will overcome these difficulties.

As the late Dr. M. Bowman used to advise us students in public health lectures—promote the affairs of your community when out in general practice, but whatever you do, do not enter politics.

After only 99 days in office, I appreciate now how government has grown into Big Business. I understand in 1923 the whole provincial budget was Ten Million Dollars. This year, this Department alone will be responsible for Forty-one Million. The Health Department, under our friend and Deputy Minister, Dr. Elliott, is becoming increasingly more complex as the demands of a growing population and northern development continues. I cannot enunciate Government policy (so close to a session), but I can say that every day new problems arise which require policy directives. Social welfare services are constantly up for review, and with the advent of the Manitoba Hospital Services Plan, we must review social policy, especially with respect to senior citizens, housing and hostel accommodation, i.e., social legislation from the bottom and health services, including hospitalization, from above. Just how far can we go in both fields is most important.

One thing that has impressed me so greatly is the high calibre of devoted civil servants. We are indeed fortunate in this province to have the type of people we have. I cannot speak too highly of the public health personnel.

Presented at the Annual Meeting of the Manitoba Medical Association, Winnipeg, October 7, 1958.

On the day I took office, the Manitoba Hospital Services Plan came into effect—July 1st, 1958—and I am sure you feel, as I do, that we here in Manitoba are at the most crucial stage in the history of hospitalization in the province.

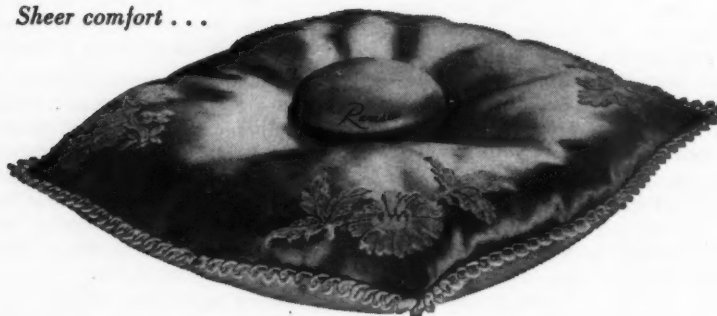
Although governments may set policies, these policies are of little avail without the active co-operation and goodwill of those who are in the health field. Mutual understanding and co-operation transcends all laws, regulations and policies. I will need the support and help of all of you doctors and those responsible for the administration of Manitoba hospitals, in order to carry out my new duties successfully.

Never before has it been so essential that we have associated with our hospitals people of high calibre and a thorough knowledge of administrative problems. The fact that such large amounts of public funds will now be used to provide hospital care and treatment makes it essential that public-spirited individuals, and particularly the trustees of hospitals, assume the responsibility of guiding the affairs of hospitals in such a way that the public will be assured of a high standard of patient care, and at the same time, public funds will be adequately protected. The hospital administrator and the hospital trustee will be looked to by governments to carry a great deal of the burden in the hospital field, since it is impossible for government officials to do this job without their co-operation.

As would be expected, the government has certain definite ideas in the field of health. Policies in this connection will be developed and put into effect at the appropriate time. It will be our practice, as far as possible, to discuss our plans respecting hospitals, with those who are responsible for the administration of hospitals, in order to take advantage of your knowledge and experience. I think I can say now that we do not intend, and I repeat, to get involved in the detail operation of hospital affairs, aside from setting certain broad overall policies, since it is our view that governments should only do these things which cannot be done as well by private and voluntary organizations. The high standard of hospital care which we enjoy today has been achieved principally under private auspices. By permitting this to continue, and the government only assisting where the need is indicated, would appear to be more in keeping with the philosophy of our way of life.

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1. Tietze, C.: Proceedings, Third International Conference Planned Parenthood, 1953. 2. Finkelstein, R.; Guttmacher, A., and Goldberg, R.: Am. J. Obst. & Gynec. 63:664 (March) 1952.

†Active agent, dodecaethyleneglycol monolaurate 5%, in a base of long-acting barrier effectiveness.

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without question, been the greatest social change ever witnessed. The social advantages and disadvantages of government sponsored hospital insurance were debated for many years prior to the actual passage of the legislation. Now that hospital insurance programs are in effect, the academic stage is finished and little purpose is to be served in continuing the debate. It now becomes the duty of all of us to do everything within our power to make the program work as effectively and efficiently as possible, in order to bring to the people the greatest advantages accruing from the program. And when I say it is the duty of everyone, I mean just that. It is unfair to lay the responsibility for the success of the Plan at the doorstep of any single group. If this is a social development, then every member of society must accept the responsibility for its success or failure in a relative way, according to the position he occupies in our society. For we must all concern ourselves with health matters since the health, vitality and happiness of our people are bound up with this question. If social thinking has reached the point where individuals claim hospital care as a social right, then assuredly no one can escape the responsibility of conducting himself in such a way as not to hamper the effectiveness of the services themselves.

We are engaged in a great social experiment and the success of the experiment will, in a large measure, depend on the degree of social responsibility which has been developed under this democratic way of life.

The Government will subject the Manitoba Hospital Services Plan to critical scrutiny, and where changes are needed to make it work more efficiently and effectively, these changes will be made.

The Plan, as it now exists, covers care in an active treatment hospital. This, as you well know, is only part of the problem which confronts us. The Plan will point up other areas which require attention. If our active treatment hospitals are to do the job properly for which they are designed, we cannot permit circumstances to exist which will curtail the effectiveness of their resources. These resources cannot be diverted to other types of care which can be better provided by other institutions specially designed, staffed and equipped for that purpose. I am referring specifically to the care and treatment of the chronically ill who, if permitted to remain in active treatment hospitals, not only occupy space required for active treatment care and cost a great deal more than necessary, but do not, in many instances, receive the type of care necessary for their recovery and rehabilitation. Special institutions will have to be designed to keep abreast with the development of medical practice in order that the taxpayer's dollar will be used as profitably as possible and at the same time, salvage the human resources of our country.

We can assist health agencies and voluntary groups in meeting the problems which the Manitoba Hospital Services Plan is precipitating. I can assure you that we will go a long way to provide incentive to construction, and to do everything we can to leave the hospitals where they belong, outside government domination. I cannot emphasize this point too much.

At present we have a committee with large Manitoba Medical Association representation working on this very problem, to tell us of the immediate needs for our province in rehabilitation and infirm care. We find we are far behind in this type of care, and we must project our thinking twenty years ahead. The success of the Plan depends on providing this type of planning.

I am also referring to proper facilities for the care of senior citizens of this province, whose stay in hospital is often prolonged because of living conditions to which they must return upon discharge. This factor hampers the patient's recovery, prolongs suffering, and costs the taxpayers needless amounts of money. I have had the actual experience of helping to develop a home for aged people, and have witnessed the profound change that comes to these individuals when they realize that the younger generation actually does care about their welfare and is willing to do something about it. Our Government intends to develop a program of providing proper living conditions for senior citizens, with vigor and determination, in order to bring new hope, and to make it possible for these people to spend the twilight years of their lives under conditions more conducive to a good way of life. Many organizations in the province have brought this problem to our attention, and we will shortly be calling a conference of all interested agencies to develop a program for the future.

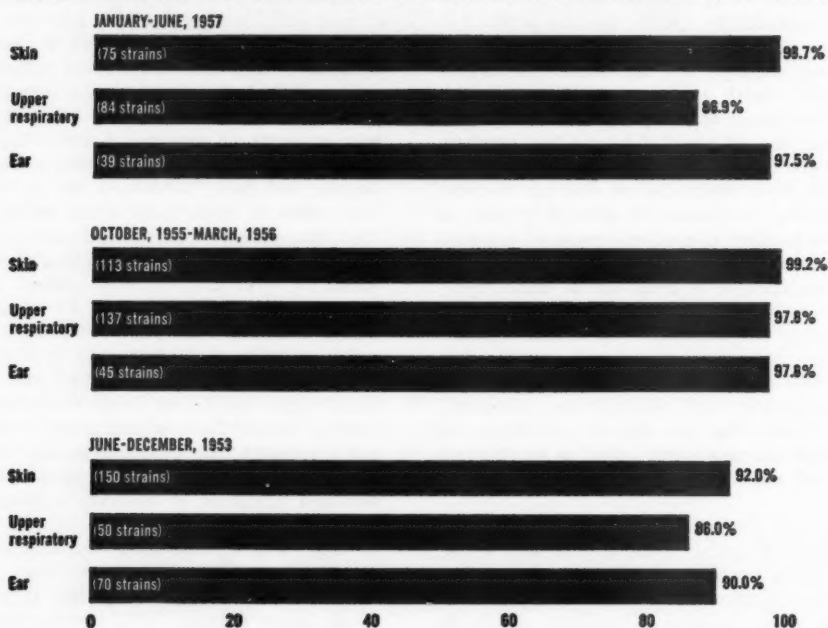
You will realize that our financial resources must, of necessity, be a limiting factor in the hospital field. Programs of this type cannot progress faster than the wealth we possess to finance them. The acquisition of trained personnel is even more important. It will, therefore, be necessary to maintain a balance between our economic position and health programs.

Another area which needs to be surveyed is that of out-patient care in our general hospitals. Every patient we can care for on an out-patient basis not only reduces the hospital costs, but also permits more effective use of our hospital resources. The present Plan is restricted to emergency diagnosis and treatment within twenty-four hours of an accident. By the extension of out-patient services to include such things as minor surgery, the large number of hospital admissions could be naturally reduced with a corresponding saving in dollars. A program of this nature would be an intermediary type of service between the services provided in a doctor's office and those provided to patients when admitted to hospital. To this end

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the Government decided it was necessary to follow the Plan as laid down for a period, but we are looking toward the possibility of improving it. I have already met with Mr. Monteith, the Federal Minister of National Health and Welfare, to discuss this and other problems in the Plan, and can assure you we just wanted to have a good look at such services. The Federal Government will include certain out-patient department services, and will co-operate with us in the future development of the Plan in this field.

I am also concerned with the unsound practice of constructing a multitude of very small hospitals in every hamlet, which in many instances do not possess, and cannot possess, the staff and physical resources to do an effective job. The standard of hospital care is dependent on sound medical practice, and the physician cannot do the best work when denied the supporting resources which have become so necessary to the practice of medicine. For this reason, consideration must be given to a system of developing a properly co-ordinated hospital system in the various hospital districts under which a large hospital will service the area to which serious and complicated cases can be referred, with smaller units caring for the less seriously ill. Under this system, all doctors in the area must have access to the larger hospital so that by their association, the standard of medical practice can be raised.

We must also give careful consideration to the duplication of services in all areas of the hospital field. The practice of duplicating expensive services in an area where it is known that each unit will not be utilized to the full extent, is clearly a waste of taxpayers' money and professional and technical resources. For this reason, it will be necessary for hospitals to co-operate in such a way that the service established in an area can be used to the fullest extent possible in order to save public funds and other resources. To this end we plan to develop an advisory committee, including Manitoba Medical Association, and different hospital administrators, trustees, representatives of different services, such as Manitoba Cancer Institute, Sanatorium Board, and University. We simply have to organize our approach to hospital construction and teaching.

Since coming to office, I cannot speak too highly of our relationship with your Manitoba Medical Association liaison committee. These are invaluable to us. Also, on short notice, Dr. Adamson agreed to serve, at least temporarily, as our medical referee to review claims. His position has been difficult. He has four doctors from the Manitoba Medical Association to assist him in reviewing some claims. Dr. Adamson has put great enthusiasm into this problem. We realize the compulsory nature of the Plan, and also that some people, through misunderstanding, did not register. We are waiving the compulsory clause temporarily,

and endeavoring to register these few people, because we feel the Plan came into effect so quickly that some people were not adequately informed. To this end we have been working on an advertising campaign, and hope to have pamphlets out any day now. However, it is heartening to know that despite our fears on July 1, 1958, 98% of the population, or about 850,000 persons, had registered. Our first report to Ottawa—a printing error caused them to enquire—we had more people registered than the census showed our population to be.

We are endeavouring to extend the benefits of the Plan as much as possible. Our medical committee is trying to define terms such as infirmity, chronic, convalescent, domiciliary, geriatric, so that we can have a common language. We see we must provide a placement service so that when medical care is no longer necessary, that the suitable accommodation, as previously indicated, can be provided. We discussed this with Mr. Monteith in Ottawa, and a technical conference is being called next week to discuss with the provinces, amongst other things, the extension of the Plan to cover chronic cases in convalescent types of hospitals.

We have discussed the care of mental and T.B. patients under the Plan. As you know, Manitoba has assumed full care—Ottawa does not participate. Again we must determine our course here, this was not written into the Act, it had been decided on principle.

In summary, we can say that the Manitoba Hospital Services Plan is the will of the people and as the increasing costs of hospital care became a crescendo, the profession held their breath, the public lost theirs. The Plan is here, and I am sure, to stay. The Plan can work, it will work, there is nothing in the plan to hurt the profession. We say, if the public call hospitalization a social right, then they must respect it as such, and cherish it as all prepaid community schemes.

The profession can do a great deal towards guarding the Plan against over-indulgence. The Government must show efficiency and energy in providing adequate acute and infirm beds and in developing hostel accommodation, home care programs, in extending the O.P.D. services. This Government will do its best to inform the public more fully as to the benefits of the Plan, and is working now to determine how far the Government can go in meeting interest and depreciation on privately raised money. We want to work with the profession, the hospital administrators, the trustees of our hospitals, to ensure a high standard of care, in adequate institutions, and do all we can to leave hospitals in voluntary hands. These are your hospitals. I deplore the statement—"the Government is in the business". We have no desire to join the 100% club—the answer is co-operation and understanding between all agencies

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Use of heparin has been a matter of investigation in coronary atherosclerotic patients with impending myocardial infarction. Doses of about 15,000 units were administered subcutaneously every 12 hours for a period of one or two weeks before commencing treatment with oral anticoagulants. In patients with myocardial infarction, treatment with heparin was prescribed during the first three weeks. After good symptomatic response had been established use of oral anticoagulants was commenced supplemented by approximately 20,000 units of heparin two or three times weekly for two or three months.

Summaries of treatment of deep venous thrombosis and pulmonary embolism show the use of unmodified Heparin preparations in amounts of about 20,000 units daily for from six to ten days. It has been anticipated that heparin would lessen the extent of venous block in leg veins and reduce clot propagation in pelvic veins. Heparin should also lessen propagation of thrombi already lodged in the pulmonary arterial tree.

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RECENT REFERENCES

Engelberg, H., Simplified Heparin Therapy of Impending and Acute Myocardial Infarction, *Ann. Int. Med.*, **44**, 466, 1956.

Crane, C., Deep Venous Thrombosis and Pulmonary Embolism, *New Eng. J. Med.*, **257**, 147, 1957.

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in hospital construction and operation. The role of the hospital administrator in setting up his hospital to run efficiently is more and more important, as is the role of the public spirited trustee.

I hope that one year from now this Plan will be working efficiently, and that we will see more clearly the road ahead. The massive registration should provide adequate statistics as to the types of care and types of institutions required in the future.

In closing, I cannot possibly tell you how much I appreciate the support, encouragement and understanding which the profession has shown in the past 99 days — I wish to thank you most sincerely.



Public Health and Hospital Insurance

M. R. Elliott, M.D.

Deputy Minister of Health

Undoubtedly the biggest and most important step of all, this past year, was the inauguration of the Hospital Insurance Plan on July 1st. This is the most significant and far reaching program that the Department has launched since its formation, as it affects directly or indirectly every man, woman and child in the province. You have, I am sure, heard and read much concerning this plan, and I have no intention at this time, of repeating any of it — however I do hope that you, as Health Officers, do not consider this as a plan entirely outside the scope of your direct interests — as operated in Manitoba, it is an integral part of the Health Department function, and forms an important part of the overall arrangements for health care. Hospital insurance services must dovetail with other health services so that the best possible use will be made of our health resources. The success of the program will depend in no small measure on the integration and co-ordination of the insurance program with other health services.

In Manitoba, while a Commissioner has been appointed who will be largely concerned with the insurance aspects, and responsible to the Minister; the Health Department itself retains jurisdiction so far as hospital standards are concerned. The closest possible working relationship must be established between Public Health services at all levels, and the hospital insurance program. This is essential in order to avoid duplication, gaps, or artificial compartments which could affect the continuity and standard of health care.

Some examples of the relationships which should be developed in this regard:

Child and Maternal Health

Integrated programs for the continuing care of mothers and children requires co-ordinated planning by both Public Health and Hospital workers.

Part of the opening address presented to the Health Officers' Section at the Annual Convention of the Manitoba Medical Association, October 6, 1958.

This is of particular importance in the peri-natal period and the care of the new born at home. Close hospital-community liaison is essential. A visit from the Public Health nurse can be most helpful if continuity has been assured by an adequate exchange of information, between the treatment services in the hospital, and the Public Health arrangements for the community. Hospitals should be encouraged to participate in the organized programs for parent education about pregnancy in which many of you have been active.

Nutrition

The food service in a hospital involves more than feeding patients at minimum cost. It is also an important factor in recovery. Furthermore, a patient's nutritional state before hospital admission and during convalescence, have an important bearing on prognosis. Your regular Public Health services in the community will be concerned with good nutrition in all circumstances.

Epidemiology

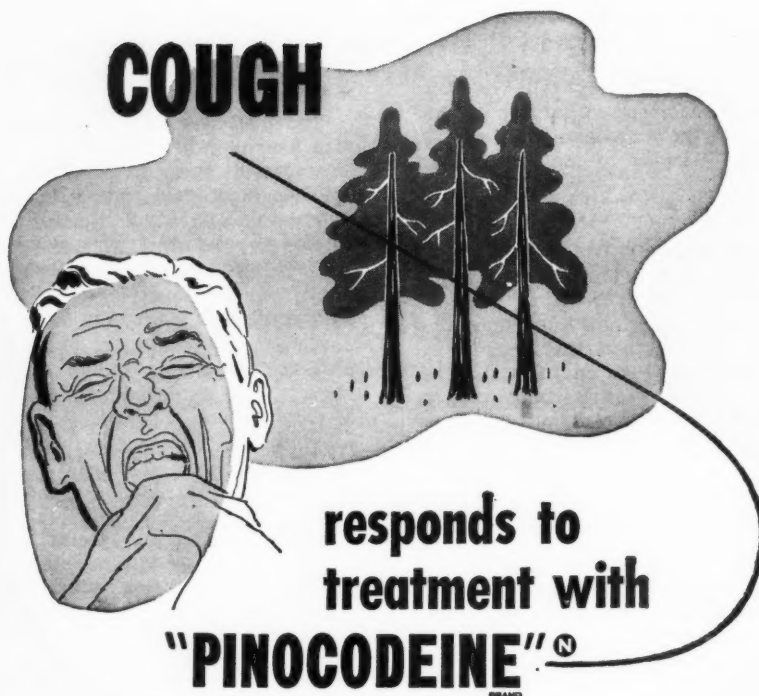
There are many points where the hospital care program, and the interests of a Health Officer concerned with epidemiology, will converge. The Medical Officer of Health, with his knowledge of communicable disease, may be of assistance to the hospital in many cases such as Staphylococcus infections, serum jaundice, infectious diarrhoea of infants. Nowadays communicable diseases are commonly treated in general hospitals, and the Medical Officer of Health must retain close connection. The carrying out in hospitals of procedures directed towards disease prevention, such as routine chest X-ray and serological tests for syphilis, are examples where the co-operation of preventive medicine as practiced by the Health Officer and the practising physician, is to the advantage of each.

Home Care

Hospital insurance programs will spark a growing trend towards the establishment of community programs, through which the equivalent of hospital care, in selected cases, may be made available in the home. Such programs are directed towards the elimination of the need for hospital admission, and arrangements for earlier discharge of suitable cases. This is a program just in its infancy in Manitoba, but it will undoubtedly be further developed. It should become an integral part of the Public Health set up, using the personnel of all available agencies, such as Victorian Order of Nurses, etc.

Local Health Units

Local health units can also play an important part in that they might serve as a local representative for both Public Health and hospital insurance service interests. The pattern which has been developed successfully in Manitoba of having the health unit established in hospitals, has already (or if it has not, it should) provided for a close



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working relationship between the two. Hospitals should be able to use to advantage, the resources of the health unit, as supported by the Provincial Health Department. Other members of the staff, in addition to the Medical Officer of Health, can provide a valuable advisory service.

One very important asset which might result from establishing close relationship, would be the access gained by the Public Health personnel to morbidity statistics present in the hospitals. At present these are not being used to best advantage in assessing the health status of the community and in planning the development of health care programs. Do you, as Health Officers, know how many of your people in your own areas are in hospital each year because of illness which could and should have been prevented? It would astound you. Are you fully acquainted with the increasing problems in geriatrics, chronic disease, rehabilita-

tion and accidents which the hospital insurance plan will bring to light, and for which statistics will be readily available, and for which Public Health services can do much? Now is the time to become actively interested in these matters, and to plan your programs towards meeting these needs.

However, the opportunity to take full advantage of these situations, and for Health Officers to play a major role, will not come automatically in all circumstances. It is up to each Public Health agency, at all levels, to themselves demonstrate that they have a prominent place in the scheme of things, and this cannot be achieved by an attitude of "we will accept the responsibility if it is offered to us." In my opinion this attitude has plagued Public Health in the past, and in some instances, opportunities have been lost to be of service to the public.

**Address by Dr. F. B. Walsh, M.D. at
Special Convocation, Oct. 10, 1958**

University of Manitoba Medical College



Anniversary parties are pleasant occasions and this dual Anniversary meeting will always be remembered as a delightful experience and certainly this Convocation will be a high point for some of us. It is thrilling to return to one's own University after more than a third of a century to see the sign of progress and to pay tribute to those who are responsible for it. After having read Doctor J. D. Adamson's excellent "Retrospection" in the current issue of the Manitoba Medical Review I am reminded again of the unique origin and, in the light of present day circumstances, the almost unbelievable courage and resourcefulness of the founders of the Manitoba Medical College. The transition to present day standards and facilities has been gradual. At all times dedicated men have been willing and able to carry on. It is a privilege to salute the present Faculty of Medicine. They and all of us well may join with Doctor Adamson in the hope so well expressed in the last sentence of his final paragraph. "We like to feel that some of the careless courage, restless ambition and audacious optimism still lingers, and we hope that "divine discontent" will provide the ecstasy of pursuit and smother any tendency to become complacent." Such a hope will obtain fulfillment through the continuing interdependence of the University, the Faculty of Medicine, the Winnipeg General and other city hospitals and the Manitoba Medical Association. Each is vital to the success of the others.

I should be remiss if I did not say to you it is my opinion that my invitation to give this address represents somewhat of a tactical error. I am confident I could have made a better choice

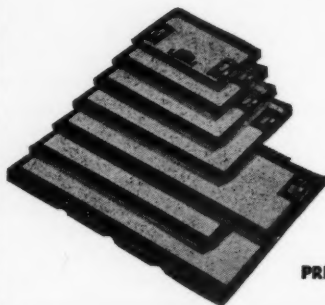
without any expansion of the invitation list. Nevertheless, I am highly honored.

Although I have had close contacts with individuals who have been responsible for changes in medical teaching and with some who have contributed extensively as regards advances in our knowledge, I have gone along with my own particular clinical interests. I do not have anything in the way of a superior record as regards teaching, and have not had any part in the formulation of plans I shall talk about.

I propose to consider briefly what may represent a great advance as regards the curriculum for medical students. This new curriculum goes into effect in the Johns Hopkins University and Medical School in 1959. The principal features of the plan are now stated without details as regards schedules.

Students in college who desire to go into medicine are to be studied by University and Medical Faculty with the object of selecting talented individuals who are to be given the opportunity to enter medical school earlier than has been standard procedure. Some students may have sufficient capacity and industry to be allowed to enter medical school after three years of college, and occasionally such requirements may be attained in two years. Exceptional students may have sufficient credits to qualify for admission to medical school without having obtained the A.B. degree. Arrangements have been made for them to continue with advanced chemistry, physics and biology and with courses in liberal arts while in medical school. An A.B. is granted on the basis of satisfactory work and examination at the end

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*Pollack, H. and Halpern, S. L.; Therapeutic Nutrition, Publication 234, Washington, D. C., National Research Council, 1952, pp. 32-40, 64-65.



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of the second year in medical school. The medical school period for selected students is five years with the fifth year being an internship year. At the completion of a year's internship an M.D. degree is granted. Other students who do not qualify for acceleration, and those who do not elect to accelerate (and it is thought there will be many such), the college training remains at four years, and the medical school training of four years is unchanged. A drastic change is made as regards the medical school year. It is being increased from thirty-two to forty weeks. Each year requires 1,680 scheduled hours work and the unscheduled time varies from a low of 350 to a high of 750 hours. The acceleration feature carries over into medical school so that an occasional highly talented and vigorously industrious individual may complete all the requirements within six years after entering college; some students will require seven years; and the remainder, as at present, will spend eight years from the time they enter college to graduation from medical school. If it is conceded that some gifted individuals succeed in gaining time through this proposed curriculum, it is equally obvious on study of it, that more time is provided during attendance at medical school than under the arrangements now in vogue.

The basic ideas which underlie the plan which is to be inaugurated in the fall of 1959 have been stated in the Johns Hopkins Magazine of June 1957, (1) "The combined undergraduate and medical curriculum has grown undesirably long." (2) "An 'iron curtain' has developed between liberal arts and medical science." (3) "Faculty strength in the basic medical sciences has tended to decline." I am going to comment briefly on what this plan may do for students of medicine, and what it may do to the faculty.

The student selected for acceleration will receive the advantage of a stimulus which commencing in college is continued through the years spent in medical school. Acknowledgment by faculty members in college and in medical school of particular merit in a student increases effort and is conducive to elevating the quality (also quantity) of teaching. Occasionally a student who has done particularly well in college may decide to forego medicine and will delve further into his particular interest. Although lost to medicine his ultimate value well may be enhanced. Others of superior capacity will continue through medicine utilizing their particular qualifications. Unfortunately, it is true that college students who intend to take medicine defer their best efforts until they have entered medical school. It is hoped that this

scheme will change this. Nowadays the basic sciences have ceased being premedical; they have become preclinical. Certainly students selected as capable of accelerating will go far in the profession of their choice. Actually it is not the acceleration in itself that is important it is the incentive that it provides. When the student enters medical school there is provided, largely because of the extension from thirty-two to forty weeks, a good deal of free time. In this time students who exhibit a spontaneous desire to commence research work will do so.

Self-imposed research has chances of producing something worthwhile and prescribed research work is almost always a real waste of time. It is envisaged that by this incentive system postgraduate arrangements of top students will be favorably influenced.

The students who do not wish to accelerate whether or not they may qualify to do so must gain from the changed curriculum. That an incentive system is in operation must raise the level of excellence of the entire class. It is a personal belief that the value of this new plan is greater during college training than in medical school. Lengthening the school year in medical school must be most valuable to all students whether or not they are accelerating. The amount of unscheduled time is conducive to self-development, and well may be sufficient reason for many students who could qualify for acceleration to refrain from doing so.

The proposed curriculum presents a real challenge to faculty members. On first thought teachers who have had experience with acceleration during World War II, I think, would agree that it should be avoided. In this curriculum acceleration is only possible for selected students wherein it differs sharply from what we know of acceleration en masse. It seems obvious that the medical school staff must be augmented and that facilities must be expanded. There may be more trouble getting an adequate teaching staff than acquiring the necessary facilities. The plan I have outlined represents a genuine effort to improve medical training, but proof of its practicability requires time.

I decided to talk to you about this remarkable effort to improve medical education because the basic problems concerning it are the same in Winnipeg and Baltimore.

I wish to extend to President Saunderson my sincere thanks for the honor the University of Manitoba has bestowed upon me and for the privilege of addressing this convocation.

Manitoba Health Service

A Report on the Manitoba Health Service (Manitoba Medical Service)

Dr. A. R. Tanner

Chairman of the Board of M.H.S.

Mr. President, Ladies and Gentlemen:

In response to an invitation from your Executive Committee, it is a privilege for me to present the following report on the affairs of the Manitoba Health Service.

First, may I introduce the members of the Executive and Board of Trustees of M.H.S.: Dr. T. E. Holland, Vice-Chairman; Mr. Morris Neaman, Honorary Treasurer; Dr. D. N. C. McIntyre, Honorary Secretary; Dr. M. R. MacCharles, member of Executive Committee; Mr. R. Murray Fisher, Q.C., LL.D., member of Executive Committee; Board members: Doctors Brian D. Best, G. M. Black, C. W. Clark, N. I. Corne, D. J. Hastings, M. S. Hollenberg, J. E. Hudson, R. A. Macpherson, L. R. Rabson, C. B. Schoemperlen, P. H. T. Thorlakson, K. R. Trueman; Messrs. John Bruce, E. W. H. Brown, M. A. Keays, Leon Mitchell, LL.B., Gilbert Robinson, J. R. Stuart.

I would now like to compare the general status of M.H.S. at 31st August 1957 and 31st August 1958, to illustrate to you the growth of the corporation's business in the past year.

Persons enrolled at 31st August 1957, 280,422. At 31st August 1958, 295,857.

Total income for year ending 31st Aug. 1957, \$6,300,000. Year ending 31st Aug. 1958, \$7,400,000.

Medical members enrolled at 31st Aug. 1957, 841. At 31st Aug. 1958, 896.

Total physicians' claims at 100% for year ending 31st Aug. 1957, \$7,300,000.00. Year ending 31st Aug. 1958, \$8,550,000.00.

Prorated and paid to physicians for year ending 31st Aug. 1957, \$5,800,000.00. Year ending 31st Aug. 1958, \$6,900,000.00.

Medical members' group life insurance:

	Members Covered
North American Life & Casualty Policy	
31st August, 1957	456
31st August, 1958	468
Travelers Insurance Policy	
31st August, 1958	309

The N.A.L.&C. policy anniversary is 1st October and the Travelers' policy anniversary is 1st March. The initial premium on the latter policy was of necessity high to comply with the insurance laws of the State of New York under which their company is governed. However, after the first anniversary of the policy and with a favourable

experience, we expect a sharp reduction in premium and a substantial refund on the first year's operation of the policy. To maintain these policies at advantageous rates for the profession as a whole, it is important that continued enrollment of new medical members be encouraged.

The Board has met on ten occasions since 24th September 1957.

In addition, members of the Executive Committee, Finance, Insurance and Building committees have given freely of their time and thought in the many meetings of these committees.

The deliberations and decisions of the Board and its committees have covered a wide field during the past year and have involved several meetings with the Executive and officers of your association. I will not attempt to summarize the activities of the Board but only give you the highlights of the year's activities.

The general policy has been to continue to extend prepaid medical coverage to as large a cross section of the population of Manitoba as possible. The majority of our subscribers is still from within Greater Winnipeg but there is increasing extension into rural Manitoba and we hope this rural expansion can be accelerated.

The coverage is best provided on a group basis with accepted underwriting standards and where possible, employer contribution towards the premium. Non-group coverage is available to individuals who meet the underwriting standards.

The financial policy has been to continue group experience rating which was started in January 1956. This has resulted in a varying increase in premium within a majority of groups but no general increase in premium across the board. Proration of doctors' claims has remained at 75% with an additional periodic adjustment varying from 12½% in October 1957 down to 5% at present and dependent upon funds being available for such a payment.

Late in 1957 it became apparent that to meet the demands of employees and management and to meet the competition of commercial carriers of health insurance, M.H.S. should be prepared to extend benefits beyond strict medical care coverage. Precedents for such extended benefits in non-profit prepaid medical plans exist in the Connecticut plan and the New York plan. The introduction of Provincial Hospital Insurance and the Winding up of the Manitoba Hospital Service Association (Manitoba Blue Cross) brought the problem of extended benefits to a head. At the last session of the Manitoba Legislature, the M.M.S. sought and obtained amendments to its charter, allowing the corporation to offer to its

subscribers, benefits in the fields of semi-private hospitalization, nursing care in the home, drugs and appliances. As part of the amendment to the Act of Incorporation, there is a change in name from Manitoba Medical Service to Manitoba Health Service. I may say this legislation was neither sought nor obtained without a great deal of soul searching and long hours of hard work on the part of the Board, the Executive of M.M.A. and the administrative staff of M.H.S.

Our first step into the field of extended benefits was to provide semi-private hospitalization from 1st July 1958 in our contract with the non-operating railway workers and in fact this contract was the prime and urgent reason for us to get into the field of extended benefits as expeditiously as we did. Manitoba Hospital Service Association cancelled their contract with the non-operating railway workers 30th June 1958 and we felt that if we, the only remaining non-profit prepaid health service organization in Manitoba could not provide the semi-private hospital coverage for the balance of the contract 31st December 1958 we would seriously jeopardize our position with respect to negotiations for future contracts with the non-operating railway workers. Negotiations for the renewal of this contract 1st January 1959 are in progress now.

In addition to enrolling the railway contract for semi-private hospital coverage, we have enrolled 2,109 persons from our other groups since 1st July, 1958.

On 1st July 1958, revisions in the terms and conditions of our subscriber contracts came into effect. Among the most important of the revisions was the consolidation and re-aligning of nine different benefit packages or contracts into three, namely,

- 1) Plan H, in-hospital medical and surgical care,
- 2) Plan HC, H plus home and office calls,
- 3) Plan HCX, HC plus laboratory and X-ray.

Other changes under these revisions were increase of upper age limit of dependent children from 18 to 19 years, provision of care in emergency situations outside of Manitoba and Canada, introduction of two-level subscription rate, i.e., single and family, thereby eliminating the third-level rate for a two-member family. As a result of these revisions and a review of underwriting standards of certain heterogeneous groups, there occurred certain reclassifications of groups and re-allocations of subscribers within these groups, and changes from group to non-group at 1st July 1958.

The inevitable happened, M.H.S. was criticized for withdrawing benefits, cancelling groups and charging too much money for services provided. The strongest and most persistent criticism has come from the Winnipeg and District Labour Council. The Board has reviewed the criticism of the Council and has authorized a committee

representative of the Executive, to meet with the representatives of the Winnipeg and District Labour Council to discuss the problems existing between Labour and M.H.S.

The Manitoba Health Service has maintained a close interest in the affairs of T.C.M.P. and largely through the efforts of our Commissioner, Dr. M. R. MacCharles and our Executive Director, Dr. J. C. MacMaster, has taken an active part in the administration and development of T.C.M.P. Dr. MacCharles has been Chairman of a T.C.M.P. committee studying the establishment of a national underwriting agency for prepaid medical plans, primarily to deal with national contracts. M.H.S. along with other prepaid medical plans across Canada is vitally interested in the work of a special C.M.A. committee appointed this year to study the constitution, by-laws and functioning of T.C.M.P.

We have maintained our close association with the Blue Shield Commission of the United States and the Western Conference of Prepaid Medical Care Plans. Both these organizations provide us with a great deal of valuable information based on the very wide experiences of their member plans. Meetings of these organizations attended by the Executive Director and members of the Executive Committees are always stimulating and productive of new ideas gleaned from other plans with problems not unlike those facing us.

The Board has accepted fees for new procedures as recommended by the Executive of the M.M.A. and the Professional Policy Committee. We have accepted one level fee for house calls at \$5.00 day and \$6.00 night or emergency. We have accepted the ruling by the Executive of the M.M.A. and the Professional Policy Committee on the payment of surgical assistants' fees.

The foregoing is a very brief review of the activities of the Board of Trustees, the Executive Committee and the administrative staff of the Manitoba Health Service over the past year and I sincerely hope that its very brevity will enhance my admiration for their patience, thoughtfulness and skill in dealing with the problems which have faced us.

I would like now to pose what to me is the all-important problem facing Manitoba Health Service. That problem is to provide Plan HCX (comprehensive coverage) at a price that the subscriber can pay, that will meet competition from commercial carriers and will fairly repay the doctor for his services.

What is Plan HCX? As our contract stands today, it is one of, if not the most comprehensive medical care contract in effect on the North American continent. It provides complete in-hospital, in-office and in-home care by general practitioner or specialist with differential fee and no extra billing under an income limit of \$10,000 per year. Also the widest freedom of choice of physician by the

subscriber and of investigation and treatment by the physician. Are we being realistic in continuing to provide such coverage? Is there such a thing as adequate comprehensive care as opposed to unlimited comprehensive care? If so, can the profession define adequate comprehensive care? If such a definition can be arrived at, can a workable contract be evolved to meet the definition?

What is the price of Plan HCX? The average family subscriber in Manitoba is paying rates comparable to the highest rates for prepaid medical care in Canada and the United States. Why are the rates high? The risks involved in comprehensive coverage are unpredictable. The utilization of comprehensive coverage is high and increases with rising rates, e.g., experience rating. The actual costs of medical care are increasing. What measures can be taken to bring the cost in line with what the subscriber can pay? Can utilization be controlled and costs reduced by introducing "users' fees" or "deductibles" applied to certain services initiated by the subscriber, such as office calls, or certain services initiated by the doctor, such as X-ray and/or laboratory procedures? Such "users' fees" or "deductibles" paid directly by the subscriber, can be applied in several ways either as a fixed amount per service or as a percentage with or without a limit in a stated period of the contract. Should various income levels have varied subscription rates? If so, should such varied subscription rates be tied to varied fee schedules. The experiences of the Michigan Medical Service are recorded in an article published in the Journal of the Michigan State Medical Society, June 1958, Vol. 57, No. 6. Michigan Medical Service has this year resumed the writing of comprehensive medical coverage. Its contracts incorporate "users' fees" and three-level incomes with varied subscription rates and fee schedules tied to the income levels.

What is fair payment to the doctor for his services? In practising medicine amongst the subscribers to Manitoba Health Service, the doctor accepts the payment from the plan in full payment for his services. The only exception to this is when he is entitled to extra bill these subscribers with an income of over \$10,000 per year. The payment to the doctor is based on a fee schedule devised by the Manitoba Medical Association for M.M.S. in 1949. There has been little or no change in this schedule since, except as previously mentioned. Medical practice under a prepaid medical plan differs from traditional private practice. The financial status of the patient is averaged out by the actuarial computation of subscription rates. The doctor is paid on the basis of a fixed fee schedule. Therefore, such a fee schedule should be a true relative value schedule in which each procedure bears a relative value to the next and procedures in one field of practice bear a relative value to those in all other fields of practice. The C.M.A. Bureau

of Economics is presently undertaking the development of a relative value fee schedule applicable to medical practice in Canada.

The Executive Director is constantly studying these and many other problems and has accumulated a vast amount of knowledge both from our own experiences and from the experiences and writings of other plans across Canada and the United States. The newsletter which medical members receive each month contains many interesting and valuable excerpts from the very wide range of reports from medical societies, prepaid medical plans, commercial insurance companies and lay organizations concerned with health insurance.

We are presently conducting an opinion poll amongst a random sample of subscribers concerning subscription rates, community rating and experience rating, "users' fees or deductibles." We are also studying the results of similar but more elaborate polls conducted by other plans, notably that done by Michigan Medical Service.

We hope that we may conduct an opinion poll amongst our medical members and are planning to invite you to a day's conference early in 1959 to discuss the whole range of problems facing Manitoba Health Service.

Mr. President, Ladies and Gentlemen, if we who by wish, will and circumstance are vitally interested in the affairs of Manitoba Health Service can meet and answer some or all of these problems we will have gone a long way towards preserving the tradition of freedom and service in the practice of Medicine in Manitoba.

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Cancer Abstracts

Activation of the Patient with Skeletal Metastatic Neoplasia. Cummings F. and Rosenthal, J. (Montefiore Hospital, New York). *J.A.M.A.*, 168: 5, 501. October 4, 1958.

Due to our aging population and to continued progress in various methods of treatment the number of patients with skeletal metastatic neoplasia is rising. It is our duty to help these patients retain function as long as possible, otherwise their increased longevity is of little value. Their major problems are pain, pathological fracture, neurological disability and general inactivity.

These authors urge an aggressive approach to maintain and regain mobilization, ambulation, weightbearing, and self-care for such patients. They warn us to preserve nutrition, activity, joint range and muscle strength in bedridden patients whose tumors may respond temporarily to hormones or chemotherapy. It is of little value to suppress a lymphoma and meanwhile to have allowed the patient to develop stiff joints, weak muscles, decubitus ulcers and malnutrition.

The use of intramedullary nailing in long bones with metastases is illustrated and recommended. The benefits of supports such as the Thomas collar and Taylor Knight brace are shown by case reports.

The authors argue for a positive approach to these unfortunate patients. They believe it better to risk pathological fractures than to confine them to bed and so speed negative calcium and nitrogen balance, phlebothrombosis, muscle wasting and helplessness.

Robert L. Cooke, M.D.

The Present Potential of Exfoliative Cytology in the Detection of Cervix Cancer: Berg, J. W. and Bader, G. M. (Strang Laboratory of Cytology and the Strang Cancer Prevention Clinic, Memorial Center for Cancer and Allied Diseases, New York). *Cancer*, 11: 4, 758, July, Aug., 1958.

The authors review their experience of 65,000 screening examinations for cervix cancer since 1946 on predominantly asymptomatic women coming to their Cancer Prevention Clinic. They attempted to have the women attend annually and obtained a 72% follow-up.

They make these points regarding cytology: (1) that it detects cervix cancer that is truly early cancer, (2) that it detects such early cancer more effectively than visual inspection, and (3) that its efficiency is high enough to detect all cancers in a curable stage.

One hundred and eight asymptomatic cervix cancers were found between 1948 and 1956. Ninety-eight of these patients had negative findings on careful pelvic examination. They calculate the

prevalence of in situ cervix carcinoma to be 194 per 100,000.

In discussing the converse arguments they pose the question, "How many cancers detectable by other methods did cytology miss?" They calculate all errors to add up to a maximum of 10% misses. If there is an interval of eight to ten years in which detectable cervix cancer remains in situ and absolutely curable then this 10% detection error is rendered insignificant by repeat annual smears.

They conclude that when cervical cytology is included in an annual examination of cancer-free women deaths from cervix cancer should be almost wholly preventable.

Robert L. Cooke, M.D.

A New and Rapid Method for Diagnosis of Vaginal and Cervical Cancer by Fluorescence Microscopy: Von Bertalanff, Masin and Masin. *Cancer*, 11: 5, pp. 873-885, Sept.-Oct. 1958.

Present efforts in the cytological diagnosis of cancer are directed towards rapid screening methods and the establishing of cytochemical criteria of malignant growth. The accepted merits of the Papanicolaou method need no elaboration but its demands of time and skill are high. Simpler and quicker screening methods would gain rapid and wide acceptance and save many lives.

It is now agreed that the nucleic acids hold a key position in protein synthesis, growth, and carcinogenesis. A fluorescence microscopic technique has been developed for the identification and localization of nucleic acids using a fluorochrome acridine orange (AO). The nucleic acid, RNA, in the cytoplasm and nucleolus gives red fluorescence, DNA of the nucleus fluoresces green. This method has been applied to exfoliative cytology in gynecological smears. This combines the advantages of diagnosis based on morphology and cytochemical changes. It is rapid and expedient.

This paper reports on such studies using smears from 390 cervical lesions, 58 gynecological cancers, and 150 normal subjects. A total of more than 1000 smears were studied. Beautiful colored plates are presented and the criteria of color and morphology in benign and malignant instances are discussed.

The advantages of the AO technique are simplicity, rapidity, and the brilliance of the fluorescence which allows quick and easy recognition of suspicious cells.

This paper may mark a giant step forward in the early detection of cervix cancer by enabling faster and easier screening of large numbers of asymptomatic women.

R. L. Cooke, M.D.

Book Review

Science and Human Virtue

Alan Kay

In Search of Man: Andre Missenard, 343 pp., New York, Hawthorne Books.

The necessity of reflecting on man in relation to his environment; the assessing of man's progress, if progress it be; the joining together, into a unit, of man's knowledge about himself and about his environment: all these things have important significance in today's confused and dangerous world. It has frequently been charged that the classical philosophers have considered these problems in an abstract and ethereal way, divorced from an intimate knowledge of the scientific facts of life, undisciplined by a scientific attitude.

Andre Missenard has attempted to correct this abstract approach to the understanding of man in relation to his environment. He is well equipped by training, experience and interest to do this. He is a scientist who has been an industrial engineer, a research worker, a soldier, an educationalist and a member of scientific missions for the United Nations. Withal, he has never lost his touch with problems of humanity. "He has been able to observe men under many different aspects. He has known saints both religious and aesthetic; despicable characters who were respected; intellectually dishonest scholars; incompetent engineers; simple workers who had genius in their manner. He has seen officers and men tremble in the face of the enemy, others who sacrifice themselves with enthusiasm."

There are many definitions of human health and welfare. Dr. Missenard adopts the broadest. Not in the restricted way of sewage disposal or epidemic control, but rather in the meaning of health adopted by the World Health Organization of the United Nations: "A state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity."

It is not only the physical health of man that is important. Of far greater importance is man's relation to fellow man and his solution of the problem affecting the fair distribution of the limited raw material sources in a rapidly expanding world population. "Ignorant of its true nature, the white race has believed that the solution of the question of happiness lay in the immoderate satisfaction of its needs and of its immediate pleasures." From the individual point of view, the cure of cancer or the prevention of poliomyelitis may seem of prime importance. But from the point of view of humanity, survival is the transcendent problem and this depends on the development of ethical and moral values applied to the distribution of the dwindling physical assets of the world. A dog eat dog world is doomed.

Man's Inheritance

Dr. Missenard's thesis is that each man has potentialities based upon his genetic inheritance which may be brought to fruition or retarded by controllable environmental factors. These factors are in the main nutritional, climatic and educational. He deals, in the appropriate sections of the book, with scientific observations upon the effects of each of these variables on the development of man's potentialities.

From a strictly scientific attitude, the criticism may be made that many of the observations are unproven and some of the conclusions drawn from them are questionable. Generally speaking, in the scientific world, unconfirmed observations do not achieve publication in a book but are found only in scientific journals. However, this may be considered a scientific "Marquis of Queensberry" rule. The justification for the inclusion of this questionable material lies in the fact that much of the research on nutrition and on climatic effects, is still too new to be scientifically proven.

What of man's relation to man, that summit area of our blundering? Can education develop ethical and moral values or is education only concerned with an amoral intelligence? Missenard's views are direct and uncompromising in the current battle of the educationalists between a concentration on sciences in opposition to the humanities.

Since the first Sputnik there has been a surge of opinion emphasizing the importance of leaning more heavily toward the sciences in our schools and universities. This is especially so in the United States and in Soviet Russia where the proponents of a scientific education have pointed out the advantage of a surplus of scientists for current industrial needs and, in particular, for the technology of modern obliterative warfare. The classics have championed the humanities as a means of improving moral and ethical standards as the only hope of survival. Missenard agrees with the scientific school but for different reasons:

"When the intelligence is not formed according to a strict (scientific) discipline, it is difficult to ascertain how the subject could acquire the qualities which are basic to the principle virtues: sincerity, courage, honesty, exactitude, and a striving for perfection. On the other hand, observations of men who have been through a strict (scientific) formative period, allow us to state that, statistically, moral values develop jointly with the scientific mind, and that those whose last years of adolescence have been given seriously to the sciences are generally ethically superior to the others. Perhaps this is because it is difficult to have two sets of behaviour—one of intellectual honesty in study, the other a compromise with truth in social life."

Finally, Missenard leaves a word of warning: "The scholars of the world should set aside their

materialistic works and elaborate a program of research for the intrinsic improvement of mankind. The hour has come when men of goodwill everywhere should join hands in a social union against the menace of decadence, even the collapse of humanity."

This is a book that ought to be read by every intelligent individual and especially by those interested in education and by parents concerned about the training of their children. It is easily readable; there is a minimum of scientific jargon; it is informative, stimulating and in places provocative. Not everyone will agree with Professor Missenard's conclusions, but they are, none the less, in this troubled and anxious world, worthy of serious consideration.

A. A. K.

Reprinted from Winnipeg Free Press, June 7, 1958.

Victorian Order of Nurses

Daily Tasks a Useful Therapy

We often think of rehabilitation in terms of teaching a stroke patient to walk again or of helping in a patient's adjustment to home and community after hospitalization. Less frequently do we think of the constant battle waged by people suffering from progressive chronic illness. To them, rehabilitation may not mean learning to walk or making a new adjustment. It may mean continuing sufficient leg activity (painful though it may be) to move a wheelchair when the arms refuse. Instead of using a loom in weaving, raising the arms to open the refrigerator door three times a day may be part of the daily therapy.

I have a particular patient in mind. An arthritic of some 35 years, she lives alone although unable to stand. To walk into her house, makes one think of childhood days and playing house. Her stove, sink, cupboards and table are all built low so that they are easily accessible from a wheelchair. Any taps or control buttons have long handles attached so that turning requires little pressure; to pull the blinds, an old-fashioned poker is used because her arms will not raise sufficiently; to wind the alarm clock, the scissor blades are put through the opening in the winder to provide leverage, floor cleaning and dusting are accomplished with a child-size mop and broom or with a duster on the yardstick.

Where does the V.O.N. nurse fit into this picture? She provides the regular weekly visits to give a bath, change the clothing and bed, and to check generally on the patient's condition. Shampoos are planned usually on the visit prior to a special occasion such as the Senior Citizens' party, Mother's Day or Christmas. Occasionally, a can and opener are waiting on the table, or a letter

that has taken hours to write is there to be posted. Yet, in spite of all the discomfort and limitations, her cheerfulness and determination constantly make us feel that we have gained more than we have given.

It has been said often that this lady should be in a nursing home or hospital for the chronically ill. Let us consider what would happen. Since this patient, if allowed to be inactive, becomes quite stiff even in one day, the routine duties involved in managing her home and preparing her meals provide a natural form of exercise. Deprived of this incentive, a substitute would have to be made, possibly through physical and occupational therapy. But would this give the same satisfaction and unconscious challenge as being independent at home? She does not feel that it would and we are inclined to agree with her.

With a thoughtful son dropping in to see her, a weekly V.O.N. visit, the occasional call from a neighbourhood worker, and the watchful eyes of the neighbour, the patient is able to lead a reasonably normal life in a home setting more pleasing to the average person than she could in a hospital or a nursing home.

Here is one example of how health and welfare agencies are co-ordinating their efforts in trying to best meet the physical, emotional and social needs of the community.

—Reprinted from V.O.N. Quarterly, Vol. 11, No. 3, 1958.

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In Lighter Vein

Music and Medicine

D. C. Brereton, M.D.

I wish to state at the outset that the above title has nothing to do with the substance of this brief discourse. Also, it is my firm belief that one should listen to music rather than read, write or talk about it. Music has been used as a therapeutic agent in some branches of medicine, but I am poorly acquainted with the results, and should think that its use as such is very limited.

It is rather surprising how many of the medical profession are interested in music, not only locally, but in every part of the world. Berlin at one time had a medical practitioners' symphony orchestra, and there are several such orchestras in the United States. Of course, the vast majority of the music lovers of the profession are in the audiences, and, as such, are good listeners and valuable supporters of the art. It is needless to say that some of our profession have enviable collections of records. The reason for this wide interest amongst the medical profession is not at once clear. I doubt that we possess a better "ear" than any other profession or group of people but I dare say we probably allow ourselves to listen and attempt to acquire a "good taste" in music.

The development of musical appreciation is intriguing. It is clear that one's taste for music changes, and that which appeals most to one in their early years usually will be superseded by other music later. If one were to allow himself to explore the better known classical repertoire from his 'teens to middle age, I would expect that in the early years the music with the most appeal would be that of Strauss, i.e. his waltzes, Tchaikowski's Nutcracker Suite, and various ballet music.

In later years this music probably would not lose favour, but one would prefer other compositions and composers. It is well known that the symphonies of Brahms require to be heard several times before they begin to be appreciated. The magnificent later quartets of Beethoven, no doubt, have a smaller listening audience than most classical works. It has been said that the string quartet music is the most difficult to compose, the most difficult to perform and the most difficult to listen to. However, for intensely profound music these last quartets of Beethoven are recommended.

What of the more modern or newer compositions which sometimes seem to be forced on us in the concert halls and on the radio? It is my belief that the vast majority of these will never last, but there are a few that will. When these compositions are played to the public without "general" acceptance, we are told that the finest music has

never been appreciated in its own time, that artists are ahead of the time, that it takes a generation or two for the ordinary listener to catch up and to understand what the composer was about. This of course is nonsense! The composers of the past, whose works have stood the test of time were recognized in their day by their contemporaries. It is also quite true that even the greatest composers wrote works which did not amount to anything.

Having played in orchestras under various conductors I have frequently been faced with usually badly written manuscript music of present day composers. It is curious how often these composers are friends, teachers or pupils of the conductor or the conductor was "forced" to perform the work by some outside influence.

It is probable that most of us have some recordings of our favorite compositions and there are doctors with fabulous collections. In these days of "hi fi" there would seem to be a new era in recording and reproduction. However, it must be obvious to everyone that through the processes of recording an artist or orchestra and reproducing the music there is a loss of much of the original quality. The quality of a "live orchestra" has not been adequately reproduced for me. In the newer orchestral recordings the most obvious failure seems to be the inability to reproduce a satisfactory violin tone, especially in the upper range of the instrument. It has been reported that a "hi fi" enthusiast attended a symphony orchestra concert and came to the conclusion they were not very good because they did not sound like his "hi fi."

In conclusion, as education in general is being scrutinized these days, the teaching of music might be examined. I must say I am not too familiar with this subject. One teacher told me teaching music was very simple—the poor pupil will never learn, the good student will learn and advance in spite of the teacher. I am sure there is more to the problem than that. However, I believe that music teachers in general have a stereotyped approach. It seems all pupils are taught as if they are to become concert artists. They all must perform at the studio clubs and at the competition festival and, of course, must take the conservatory examinations. I wonder how much these things discourage some pupils. It seems obvious to me that in the average case it does not matter so much what the pupil does with music, as what music does for the pupil.

"The man that hath no music in himself,
Nor is not mov'd with concord of sweet sounds,
Is fit for treasons, stratagems and spoils;
The motions of his spirit are as dull as night
And his affections as dark as Erebus:
Let no such man be trusted."

—Shakespeare.



Social News

Reported by K. Borthwick-Leslie, M.D.



Question (?) — Is the present slump in news an aftermath of the big convention, or have our members succumbed to ye snowdrifts and frosty, frosty winter? Speaking of snow drifts, I must be "chicken" — didn't even try to harness up the cocker spaniels and dog sled to get to the hospitals. The hardy souls who walked miles, are welcome, but Marj Bennett, on snowshoes, and Dr. Benoit on horseback must have had fun — That's the good old spirit.

Congratulations to Dr. G. B. McTavish, who was named Vice President of the Interstate Postgraduate Medical Association of North America.

The meeting this year was in Cleveland, Ohio — and was the tenth annual session in succession that Dr. McTavish has attended.

It is indeed heartening to read that men like Dr. Colin Ferguson once read and enjoyed books like *Black Beauty*, *Treasure Island*, etc. — although comic books, movies, radio and T.V. are detracting from the reading habits of our present youngsters, there seems to be a definite swing back to the old favorites, so I hope Dr. Ferguson is being overly pessimistic.

The youngsters now have such a vastly improved number of new books, fascinating ones, (I love them) and library facilities.

Welcome to the Medical Arts, to Dr. Ruth Mathers, who is now located in 113. Happy future, Ruth.

Dr. Aldis (Thorlakson) Wengel has also opened her office on Wolseley Ave. — directly across from the Misericordia Hospital — and is finding life interesting and hectic. Hats off to you Aldis, maybe we'll catch you one of these days to organize a meeting of the Medical Women's Section (?)

Who is happy to have the evening Medical Arts "marauder" behind bars?

Those of us in 132 are, particularly Don Hastings — as are all the others on the main floor. I was beginning to think about being a pistol packing mama, when working late. Magnetic qualities are O.K. but not in attracting inebriated thieves.

Dr. and Mrs. T. A. Lebbetter Sr. announce the engagement of their daughter Florence Patricia to Douglas Wm. Keough, son of Mrs. Harry Keough and the late Mr. Keough. The wedding will be in St. Ignatius Church, December 13th.

Dr. and Mrs. Grahame Thorlakson, Dawson Creek, B.C. announce the arrival of Grahame Scott, Nov. 16, 1958, a brother for Cameron.

Drs. Helen and Clarence Cohoe, Pilot Mound, Man., announce the birth of Patrick David, Nov. 18, 1958.

Dr. and Mrs. R. K. Findlay, Killarney, Man., welcome a second daughter, Karen Leith, Nov. 19, 1958.

Dr. and Mrs. Roger T. Collins, Roseau, Minn., announce the birth of Mark Frederick, Nov. 17, 1958, brother for Carla.

Dr. and Mrs. Harley Hughes, Fort William, Ont., are happy to announce the birth of their daughter, on Nov. 13th, 1958.

Dr. and Mrs. E. L. Lansdown (nee Marlene Musgrove) welcome their son, Gordon Douglas, Nov. 13, 1958.

Dr. and Mrs. V. W. Paul (nee Shirley Gyles) report the arrival of a daughter in San Fernando, Trinidad.

I can't resist this one: After an emergency last Saturday night, H.R.H. J. Hillsman insisted on me going home with him, joining a post goose dinner party. All the ladies dressed for the occasion, but me — in the plaid slacks, etc. — an old friend enquiring about the pending wedding of my son in Montreal, asked about details, and was rather startled to find that the new in-laws are very quiet conservative English people. Whereupon John calls across the room: "Now Katie, for goodness' sake be yourself while in Montreal — you can't expect to be the Tugboat Annie of the Medical Profession in Winnipeg, and act like a lady in Montreal!" Dead silence then roars of laughter while I tried to get my jaws back in place. Who could have shot whom?

Merry Xmas, Happy Xmas, and all the best for 1959.

Signing off — Tugboat Katie.

DEPARTMENT OF HEALTH & PUBLIC WELFARE COMMUNICABLE DISEASE PICTURE

North of 53 District

Six of the twenty-six cases of poliomyelitis reported in the province during this period were from this area, of these five were in Treaty Indians or Eskimos, one of the Treaty Indian cases died. Enteritis and measles still prevalent.

Northern District

A further eight cases of influenza have been reported and eight cases of enteritis.

Northwestern District

Two cases of polio reported, as well as one bacillary dysentery, one undulant fever and three whooping cough.

Brandon District

No further cases of polio reported since the one given in our last report as of October 15. No cases of bacillary dysentery reported. Measles and mumps are down.

Central District

Two polio cases reported, six cases of infectious hepatitis, one scarlet fever.

Southern District

Sixteen cases of measles and two enteritis.

LIST OF DEATHS FROM COMMUNICABLE DISEASES

October, 1958

URBAN: Cancer, 72; Diarrhoea and Enteritis, 1; Pneumonia, Lobar (490), 4; Pneumonias (other forms), 10; Poliomyelitis, 4; Syphilis, 1; Tuberculosis, 2; Other diseases attributable to viruses, 1; Encephalitis (infectious), 1. Other deaths under 1 year, 31. Other deaths over 1 year, 236. Stillbirths, 18. Total, 381.

RURAL: Cancer, 26; Diarrhoea and Enteritis, 7; Influenza, 2; Jaundice (infectious), 1; Pneumonia, Lobar (490), 1; Pneumonias (other forms), 3; Poliomyelitis, 1; Tuberculosis, 4. Other deaths under 1 year, 15. Other deaths over 1 year, 169. Stillbirths, 6. Total, 235.

INDIANS: Diarrhoea and Enteritis, 3; Unspecified forms of dysentery, 1. Other deaths under 1 year, 3. Other deaths over 1 year, 1. Stillbirths, 2. Total, 10.

General

Only twenty-six cases of polio reported compared with forty-three the previous four week period. As at time of reporting the epidemic definitely seems on the wane. Infectious hepatitis is still present, chiefly in the Winnipeg area and there is also a definite epidemic of scarlet fever in this same area. The Department would be grateful to hear if any cases of nephritis have followed the outbreak of scarlet fever.

Winnipeg District

Fifteen cases of polio were reported during the period, a drop from thirty-six the previous four week period. Thirty-nine cases of infectious hepatitis. 170 cases of scarlet fever as compared with fourteen cases the previous four week period. It would be interesting to know if scarlet fever in the Winnipeg area has been followed by nephritis in any instance.

Detailmen's Directory

Representing Review Advertisers in this issue, whose names are not listed under a business address.

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G. J. Bowen	GR 5-4559
R. G. (Bud) Harman	LE 3-7509
Alan (Al) M. Grant	AL 6-0125
Bruce Hunter	GL 2-5263

Arlington-Funk Laboratories, division U.S. Vitamin Corp. of Canada, Ltd.

Ed Lessor	GL 3-0807
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Ayerst McKenna and Harrison

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C. C. Savage	SU 3-4558
Jack Ostrow	ED 4-3240

Bencard, C. L.

W. J. Tarbet	HU 9-4438
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Calmic Limited

Ken Harrison	VE 2-4120
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Carnation Company Ltd.

Tod Thurston	SU 3-9370
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Ciba Company Ltd.

Edward Stephany	HU 9-7292
Leslie D. MacLean	CE 3-3240

Connaught Laboratories

Brathwaites Ltd.	WH 2-2635
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Frosst, Charles E.

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W. J. McGurran	AL 3-0722
E. R. Mitchell	HU 9-6164
R. P. Roberts	AL 3-4032

Lederle Laboratories

J. G. Jonasson	SP 5-4862
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J. E. Smith	AL 3-0437

Merck, Sharp and Dohme (Canada) Ltd.

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Fred Gallinger	ED 4-1367

Sandoz Pharmaceuticals Ltd.

H. D. Robins	ED 8-8216
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Schmid (Canada) Ltd., Julius

H. V. Walker	LE 3-8664
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Searle & Co., G. D.

Harry Chambers	LE 3-6558
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Squibb & Sons, E. R.

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M. G. Waddell	GR 5-1552

Will, Charles R.

A. C. Payne	VE 2-2055
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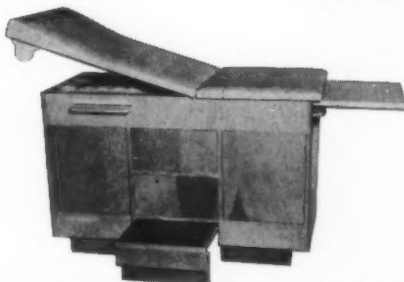
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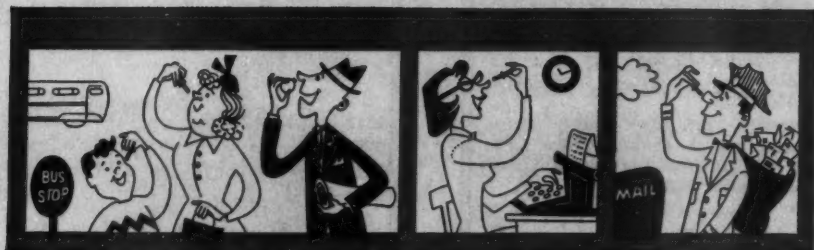
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